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THE
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Aid for the Druggists of Halifax

State Associations Lead in Helping Pharmacists of the Stricken City

TWENTY-FIVE retail druggists were among those who suffered great losses in the disaster which visited Halifax in the early part of December, a catastrophe in some respects unparalleled in the history of calamities on this Continent. In magnitude of loss of life the disaster stands in the terrible front line with 1,175 dead by actual count at the morgue, 2,000 badly injured, 400 rendered blind, and 3,000 more slightly injured. The casualties resulting from one dread explosion, which came in a second of time, are carefully estimated at 6,000—more than half of them, fortunately, but slight. For the two or three days following the explosion and resulting conflagration it was almost the exception to meet a man who had not been cut by flying glass or other material. It was this shower of broken glass that took the sight from so many hundreds of the victims.

Here stood the Agricola street drug store of A. A. Thompson, one of the modern and progressive pharmacies of Halifax.

The property loss, while not yet definitely arrived at, is certainly not less than $25,000,000, the chairman of the Rehabilitation Committee, J. H. Winfield, general manager of the Maritime Telegraph and Telephone Company, estimating it at $50,000,000, which amount includes the tonnage in the harbor and along the water front. A notably sad feature of the catastrophe was the separation of families and the uncertainty whether many people were dead or alive, though this phase of the calamity has now passed. The terrific force of the explosion, the panic that ensued, the fearful rapidity of the spreading flames, caused a stampede which with its attendant horrors stands unparalleled in history. Of what happened in the zone of death, there are comparatively few left to tell. Here and there at the hospitals, and in the score of institutions, the officials in charge left their own damage uncared for and turned to the urgent duty of helping the injured. The story of their experiences will never be fully told.

Then came the relief from all over Canada, from Massachusetts and other American points. Gifts in supplies, help in money, and the assistance of tender hands of skilled physicians, surgeons and nurses from the United States ministered to the sufferers, the number of nurses in Halifax on Christmas Day in a dozen hospitals numbering 240.

The losses sustained by the retail drug trade, not mentioning the wholesale branch of the National Drug and Chemical Company, has already been alluded to. In Halifax and Dartmouth (the town on the Eastern side of the harbor) there were 31 drug stores, some totally destroyed and others bearing heavy losses, some out of commission and all damaged more or less. The aggregate loss to druggists is approximately $50,000, the individual losses as furnished by the National Drug and Chemical Company, whose American manager, Thomas A. Hedley is custodian of the fund the Era is raising for Halifax druggists, being as follows:

A. A. Thompson, Agricola street	$3.800.00
A. A. Thompson, Windsor street	2,350.00
A. A. Thompson, Almon street	5,684.00
G. A. Burbidge	450.00
T. M. Powers & Son	7,843.00
Kinley's Ltd.	500.00
Buckley's Drug Store	468.50
Buckley Bros.	435.00
Buckley Drug Co.	160.00
Buckley & Co.	40.00
W. H. Stevens	1,050.00
Coombes & Co.	1,500.00
Brown Bros.	434.50
McLeod & Balcom	500.00
E. M. McLeod	350.00
Henry Curtis	2,700.00
Irwin & Sons	900.00
M. D. Logan, Agricola street	2,305.00
M. D. Logan, Gottingen street	1,310.00
G. MacGillvary	800.00
R. G. Blackie	168.75
H. A. Watson, Jacob street	590.00
H. A. Watson, Gottingen street	485.00
W. R. Nicholson	650.00
J. D. Walsh	400.00
M. P. McCaffery	1,200.00
T. J. Barron	1,500.00
R. J. Phillips	1.900.00
J. McD. Taylor	100.00
E. J. Butcher	1,200.00
C. Mumford	6,400.00

The greater part of this loss was in actual stock, but the damage to buildings and fixtures, including glass, was very heavy. The above figures first submitted by individual druggists, checked up by a local committee, and then passed upon by Mr. L. A. Miles of the National Drug and Chemical Company, represent the net loss uncovered by insurance.

Era's Work for Subscriptions

The initial steps to render aid to the Halifax druggists were undertaken by the Era, which mailed an appeal to its readers for contributions of funds to be administered directly by Thomas A. Hedley, through the National Drug and Chemical Company. This appeal was hardly in the mails however, before the presidents of the New England and New York State pharmaceutical associations, the official representatives of retail druggists in the states closest to Halifax, with fine promptitude answered the appeal for help and arranged a meeting on the evening of December 23, at the Hotel Kimball, in Springfield, Mass., to decide upon the line of action that should be taken to aid the Halifax druggists.

Those in attendance at the meeting were: R. A. Austin, president of the New York State Ph.A.; C. S. Ramsay, president of the Connecticut Ph.A.; N. F. Reiner, president of the Rhode Island Ph.A.; C. P. Thompson, vice-president of the Massachusetts Ph.A., and E. B. Hyde, representing F. W. Churchill, president of the Vermont Ph.A. Presidents H. C. Buxton, of the Maine association, and William G. McCullis, of the New Hampshire association, were unable to attend, but they telegraphed their hearty approval of the movement and pledged their active support to any action the presidents at the conference might decide upon. At the meeting, after an informal discussion, the presidents organized themselves into a "New York and New England Committee for the Relief of Halifax Druggists," Mr. Austin, of New York, being selected as chairman, Mr. Reiner, of Rhode Island, as secretary, and Mr. Ramsay, of Connecticut, as treasurer.

It was also decided to send C. P. Thompson, of Springfield, Mass., to Halifax to gather reliable information and to report on the most effective means of helping the suffering druggists. Mr. Thompson volunteered to leave the day after Christmas, and the committee arranged to distribute throughout their respective States blank slips for contributions. These blanks are now being distributed by local workers and salesmen of the various manufacturing and jobbing houses visiting the trade in those sections.

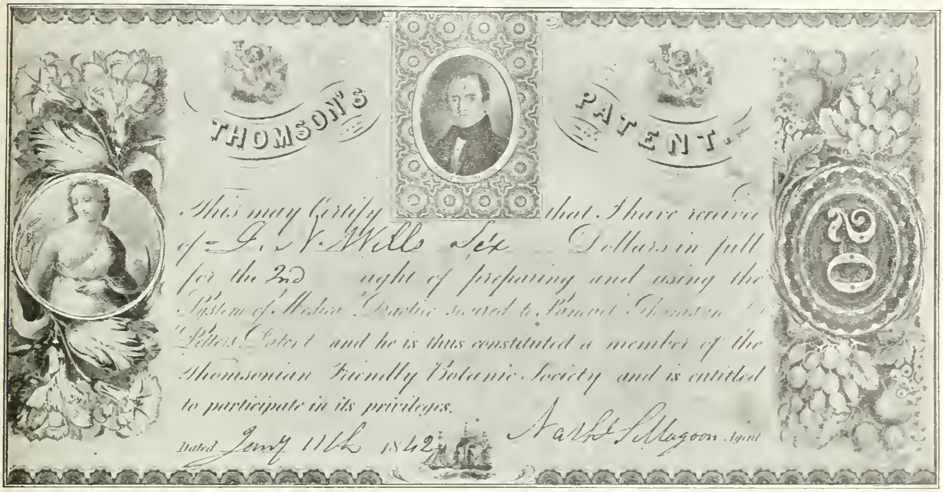
Donors to Fund Collected by the Era

Contributions to the general fund received by the Era from druggists throughout the country, including those received on December 27, amount to $407.50, which has been turned over to Thomas A. Hedley, treasurer of the Halifax Druggists' Fund. We are pleased to acknowledge the generous contributions that have so far been made to this worthy cause, the names of the donors and the amount of their contributions being as follows:

D. O. Haynes & Co., New York	$100.00
Valentine H. Smith & Co., Philadelphia, Pa	25.00
Elcaya Co., Inc., New York	25.00
Eugene K. Plumley, Philadelphia	25.00
John Schoenegan, New York	25.00
Matthews Bros., Inc., Scranton, Pa.	10.00
Owl Drug Co., Dallas, Texas	10.00
N. Y. County Pharmaceutical Society, New York	10.00
Thos. J. Graham, Elizabeth, N. J.	5.00
Eugene Laverty, Middletown, Pa.	5.00
F. J. Herbst, Milford, Pa.	5.00
George C. Bowes, New York	5.00
James A. Thompson, Paragould, Ark.	5.00
John J. Baker, Jr., White Haven, Pa.	5.00
Walter G. Leacock, Detroit, Mich.	6.00
C. H. Riddle, Prairie City, Iowa	5.00
C. E. Barnhart, Peoria, Ill.	5.00
E. L. Green, Hankinson, N. Dakota	5.00
Richardson Drug Co., East Helena, Mont.	5.00
Edwin A. Brown, Winona, Minn.	5.00
Sandidge & Brayman, Mulberry, Kansas	5.00
Sibila-Schmidt Co., Canton, Ohio	5.00
Wm. Rademacher, Winona, Minn.	5.00
Ben Lee Young, Huntsville, Ala.	5.00
A. Romano, Chicago, Ill.	5.00
W. G. Willman, Brownsville, Texas	5.00
Josiah C. Peacock, Philadelphia	5.00
University Pharmacies, Seattle, Wash.	5.00
J. B. Coakley, Perry, Iowa	1.00
Carto The Druggist, Chester, Pa.	1.00
H. H. Freitag, Baltimore, Md.	1.00
Dr. A. LeBar & Son, Stroudsburg, Pa.	1.00
John P. Gorman, Jewett City, Conn.	2.00
Harry L. Cox, Ephrata, Pa.	1.00
Alfred W. Pauley, St. Louis, Mo.	2.00
Green's Pharmacy Co., Bellefonte, Pa.	1.00
D. Davidson, New York	2.00
A. T. Masters, Lebanon, Ind.	2.00
Edward Blust, Utica, N. Y.	3.00
Kaufmann's Pharmacy, Kansas City, Mo.	1.00
E. B. Switzer, Ph.C., Fromsberg, Mont.	1.00
K. G. Phillips, Deadwood, S. Dakota	2.00
George H. Kramer, Philadelphia, Pa.	2.00
Anonymous, San Francisco, Cal.	1.00
W. D. Case, Canton, Minn.	2.00
E. M. Stapleton, Watertown, Wis.	2.00
Anonymous, Cooperstown, N. Dakota	1.00
Lanier Robb, Heyworth, Ill.	2.00
F. G. Frick & Co., Plattsmouth, Neb.	1.00
G. O. Young, Buckhannon, W. Va.	2.50
Jos. Milner & Son, Florence, Ala.	.50
F. A. Tucker, Manchester, N. Y.	1.00
W. P. Crossman, Toledo, Iowa	1.00
A. Kraft, Hoople, N. Dakota	2.50
M. H. Dingman, Columbus, Ohio	3.00
B. F. Jackson & Co., Arcade, N. Y.	1.00
Owen G. Withers, Eddyville, Ky.	1.00
W. H. Fogas, Mt. Vernon, Ind.	2.00
A. C. Smith, Windsor, Ont.	1.00
E. K. Thompson & Sons, Titusville, Pa.	2.00
Alfred G. Walker, Ann Arbor, Mich.	1.00
L. J. Pettus, Chattanooga, Tenn.	1.00
F. A. Hunold, Port Washington, N. Y.	1.00
Wentworth Drug Co., Chicago, Ill.	2.00
Coal Roller Pill Co., New Orleans, La.	1.00
J. V. Roushar, Cutler, Iowa	2.00
H. B. Olson, Union City, Conn.	2.00
Horine's Drug Store, Brunswick, Md.	1.00
J. W. Williams, Minneapolis, Minn.	1.00
H. Y. Smith, New York	2.00
Wm. D. Day, Campbell, N. Y.	1.00
John Jos. Hubel, New York	2.00
W. G. Poole, Flint, Mich.	2.00
P. G. Lucas, San Antonio, Tex.	2.00
Meyer Bros.' Drug Store, St. Louis, Mo.	1.00
Walter F. Meyer, Colorado City, Colo.	1.00
Judson & Hawkins, Clayton, Mich.	3.00
Total.....	$407.50

Thomsonian Remedies in Pharmacy

Sidelights on the Strange Career of an American Pioneer in Botanic Medicine



THOMSON'S PATENT.

This may Certify that I have receive of J. N. Wells Six Dollars in full for the 2nd right of preparing and using the System of Medical Practice secured to Samuel Thomson by Letters Patent and he is thus constituted a member of the Thomsonian Friendly Botanic Society and is entitled to participate in its privileges.

Dated Jany 11th 1842

Nath'l L Magoon Agent

Fac simile of Certificate granted January 11, 1842, by Nath'l Magoon, agent, giving a subscriber the right to use the System of Medical Practice secured to Thomson by Letters Patent.

THE pharmacist of the present day, especially if his experience should happen to overlap the last four or five decades of the country's history, will have doubtless met with a half dozen compounds known as "Thomsonian remedies." Occasionally he may have calls for a preparation of this character at the present day, a direct descendant of these being represented by the formula for tincture of capsicum and myrrh, official in the National Formulary, and still carrying as synonyms the significant appellatives "Hot Drops" and "Thomsonian Number Six."

To fully understand the significance of this Thomsonian nomenclature, it is necessary to go back to the originator of a practice of medicine which furnishes one of the most unique and curious epochs of the healing art in America. Born on Feb. 9, 1769, in the town of Alstead, Cheshire county, N.H., Dr. Samuel Thomson early came under the influence of one Dr. Kittridge of Walpole, whose system of practice was peculiarly his own, the medicines he used being prepared by himself from the "roots and herbs of the country." According to Thomson's own "Narrative of his Life," Dr. Kittridge was "governed in his practice by that great plan which is dictated by nature; and the uncommon success he met with, is evidence enough to satisfy any reasonable mind, of the superiority of it, over the practice of those who become doctors by reading only, with their poisonous instruments of torture." Imbued with these ideas, Thomson began investigations on his own account, growing very bitter in his accusations against the medical profession generally, and particularly against the doctors who attended his mother in her final illness and against whom he expressed this sentiment; "the doctors gave her disease the name of galloping consumption, which I thought was a very appropriate name; for they are the riders, and their whip is mercury, opium, and vitriol, and they galloped her out of the world in about nine weeks."

Thomson continued his studies of botanic remedies, experimenting on the members of his own family, apparently making use of such help as he could get from other "root doctors" in his vicinity whom he occasionally called upon. His reputation soon began to extend beyond his own neighborhood, and his "Narrative" records visits to Boston, New York, Richmond, and later shows that he travelled throughout New England and the Central West. In every place he went he gave vent to feeling and criticisms of the regular medical profession of his day, an opposition that was aggressively met and returned by the members of the profession generally.

Thomson's combative disposition always kept him in trouble, and it is probable that few men making claim to professional knowledge ever experienced more difficulties in the pathway of life than he did. In 1808 he was charged with murder by "sweating two children to death," and in 1809 was arrested for the murder of a young man by the name of Lovett who died while being attended by him. This trial, reported in 6 Mass, 134, became a celebrated case in the history of civil malpractice in the United States. Thomson was "indicted for the wilful murder of Ezra Lovett, Jun., by giving him poison, called *lobelia,* on the 9th day of January, last (1809), of which he died on the next day. On the 20th day of December, at an adjournment of this term, the prisoner was tried for this offense, before the Chief Justice, and the Judges Sewall and Parker. On the trial, it appeared in evidence that the prisoner, some time in the preceding December, came into Beverly, where the deceased then lived, announced himself as a physician, and professed an ability to cure all fevers, whether *black, gray, green,* or *yellow,* declaring that the country was much imposed upon by physicians, who were all wrong, if he was right. He possessed several drugs, which he used as medicines, and to which he gave singular names. One he called *coffee,* another, *well-my-gristle;* and a third, *ramcats.* He had several patients in Beverly and in Salem, previous to Monday, the 2nd of January, when the deceased, having been for several days confined to his house by a cold, requested that the prisoner might be sent for as a physician."

Thus reads the first paragraph of the reported record of the trial, and from the evidence presented, it appeared that the *coffee* administered was a decoction of marsh-rosemary, mixed with the bark of bayberry bush, which was not supposed to have injured the deceased. But the powder, which Thomson said he relied upon chiefly in his practice, and which was the emetic so often administered by him to the deceased, was the pulverized plant, trivially called *Indian tobacco,* identified by the Rev. Dr. Cutler as lobelia. Milo A. McClelland, M.D., author of "Civil Malpractice," commenting on the case nearly seventy years later, states that it is the only one he has been able to find, in which "the allegation of murder or manslaughter has been founded on the administration of nostrums by charlatans. Followers of the Thomsonian . . . practice boast that Thomson was *discharged without being put on his defence,'* as if that was sufficient to raise their 'system' to a decent position in medicine. The court recognized that the case was one of culpable ignorance, sounding in it fatal damage to others; but it interposed, as it was bound to, the humane rule, that what was done with a *good intention* should not be alleged as a crime, and so the defendant was shielded from a just punishment."

In 1813, Thomson obtained a patent for his system of medicine, rights to practice which were supplied by himself or his authorized agents to others for a consideration, a *fac simile* of the "*certificate*" issued to one J. N. Wells being reproduced herewith, the fee exacted for the "individual" right to prepare and use the "system" being $6, an amount which apparently was not always uniform, some members of the "Thomsonian Friendly Botanic Society" being charged more, as would appear from occasional certificates still in existence. In various places throughout the country Thomson established agencies for the sale of rights to practice, which agencies also carried stocks of drugs to sell to purchasers of the patents. These drugs were all indigenous botanicals, although from a perusal of his "Materia Medica" which ran through many editions, the author seems to have drawn upon the medical information of his day, if for nothing more than to take an opposing view.

To the practitioner Thomson issued the following rules, which are here reproduced from the 12th edition of his "Materia Medica," printed at Albany, N. Y., in 1841:

> 1. At the commencement of an attack of disease, the first thing to be brought to mind should be, what has caused the attack, and how should it be treated, and how removed.
>
> The "ways and means" cause much trouble and speculation with the patient, who should ever be alive to the best means for his future welfare.
>
> 2. One of the fundamental principles in the Thomsonian practice is, that all diseases originate from the same cause, directly or indirectly—that is, from the deranged state of the fluids of the body, by the absence of heat, or loss of vitality; which produces an over pressure or excess of circulation to the head, and a proportionate deficiency in the feet.
>
> This creates derangement in the organs of sense, and a proportionate want of action with the digestive apparatus, by which the bowels become constipated, and the evacuations of the body are much obstructed, for want of the requisite action and equilibrium in the fluids, and the consequent order attendant upon such a state of things.
>
> 3. This derangement having been produced by the loss of vitality, or taking cold, and the consequent absence of heat at the lower extremities, and an excess at the head in the same degree, to bring about an equilibrium properly through the system, or to establish order where there is naught but disorder, is what we wish. To restore warmth to the feet and reduce the pressure upon the brain, by correcting digestion, promoting perspiration, and removing obstructions from the stomach, bowels, and their dependencies, is the proper mode to effect this object.
>
> 4. The best method yet discovered is a thorough Thomsonian course of medicine, when properly administered, which creates a healthy circulating medium in the lower extremities, equal with that of the head, and thus produces order and regularity both in body and mind.
>
> 5. The first knowledge with a practitioner should be to understand the principles or cause of the derangement, disease, or loss of heat; and secondly the proper course of treatment to bring the deranged parts to order by restoring the vitality, or heat, by the loss of which the whole man has become diseased.
>
> 6. There is no immediate danger in any case where the veins on the patient's hands and feet are full. This is the surest test by which a practitioner may determine whether or not his patient is doing well. Or a long and regular respiration will indicate the same state of the body, as well as a regular pulse.

Thomson's medical compounds are catalogued in six classes; No. 1, preparations of emetic, the chief drug being lobelia; No. 2, stimulants, in which are included, capsicum, black pepper and ginger; No. 3, astringents, which includes thirteen drugs, bayberry coming first and followed by white pond lily, hemlock, marsh rosemary, sumac, etc. Compounds of No. 3 were particularly recommended for the cure of canker. No. 4, included bitters, starting with balmony, and including golden seal, poplar, barberry, etc., various compounds being made from these drugs, as "spice bitters, astringent bitters, dyspeptic powders, woman's friend," etc. No. 5, drugs to restore digestion, including such articles as peach tree, black cherry, bitter almond, with various compounds; No. 6, antiseptic and stimulant, the typical drug being myrrh, which Thomson states "is the most powerful antiseptic known, and is on that account highly serviceable in all putrid affections whatever." Here is to be found the original formula for "Number Six, Rheumatic or Hot Drops," with its synonym "improved rheumatic drops" as also the variant formula for "Composition Powders," types of which are still preserved in the formulas under their Thomsonian names in the N. F.

Samuel Thomson.

Thomson's "Materia Medica or Botanic Family Physician," and the "Narrative of the Life and Medical Discoveries of Samuel Thomson," written by himself were each published in many editions, the 12th edition, from which many of the facts here touched upon were taken, being printed at Albany in 1841. This edition contains a steel engraving of Thomson used as a frontispiece, as also a considerable number of colored plates of the plants described in the book, Thomson's "Narrative," the 10th edition of which was published in Columbus, O., in 1835, contains an account of the author's "system of practice and the manner of curing disease with vegetable medicine, upon a plan entirely new." To the reader of the present day the style of relation is cumbersome, the text being loaded up with unimportant details, the personal pronoun appearing in almost every paragraph from one to twenty-five times. At best, the perusal of the book is a wearisome task, and the reader is willing to leave it for more interesting records of the progress of medicine. Yet empiricist as he was, the average individual who studies his life and theories will acknowledge that he influenced the practice of medicine in this country. He was no research worker in the domain of pharmacology, as that subject is understood at the present day, but he believed in American drugs, and his studies and investigations of lobelia and other indigenous medicinal plants, it must be conceded, were in no small degree responsible for the later and more meritorious work that was taken up by the Eclectic practitioners and the pharmaceutical chemists in the decades following Thomson's death at Boston in 1843 "after a tedious application of his own medicine."

That Thomson was involved somewhat in the Morgan Masonic controversy which originated in the Western part of New York State in the first half of the nineteenth century, would appear from a study of his "Narrative." This movement began with the reported abduction of one William Morgan, a mechanic of Batavia, N. Y., who, it was asserted, was about to publish a book exposing the secrets of the order of which he was a member, which caused him to be kidnapped and carried off by members of the fraternity in that part of the country. The investigations and prosecutions of all who were in any way supposed to have been concerned in the abduction fanned into existence a movement which culminated in the formation of an anti-masonic political party that, by 1831, had become numerous enough to meet in Baltimore where a national convention was held and which nominated William Wirt of Maryland, president of the United States, and Amos Ellmaker of Pennsylvania for vice-president.

Thomson in 1825 had appointed one John Locke of Portsmouth, N. Y., to act as his agent and to sell his medicines. A controversy arose between Thomson and the agent, and in the investigation that followed, which is reported in the "Narrative," Thomson suggests that a plot had been "laid against him," for he thinks his "agent and two of the committee are Masons, and that Mr. Locke is a Mason; if so, four out of five against me were Masons." This veiled reference to the Masonic order prompts Prof. John Uri Lloyd to make the suggestion that "a share, and possibly no small proportion of Thomson's troubles came also from his pronounced political activity at a time when in American politics no toleration whatever was exhibited by one party for an adherent of the opposite political faith." Thomson's mental characteristics, as reflected in his writings, give credence to the belief that he was one who was never able to compromise or settle controversies by mutual concessions, and as he was against the recognized medical practitioners of his day, so was he against all those who practiced beliefs not to his way of thinking.

Facing Facts

By L. E. SAYRE, B.Sc., M.Ph.
Dean of the School of Pharmacy, University of Kansas

Professor Sayre vigorously wields a stout and well-directed cudgel in defence of the Profession of Pharmacy. He grants no quarter to commercialism, which he does not recognize as "an inevitable result of development" or "a natural and evolutionary change," but as the manifestation of "an irresponsible, unscrupulous, and unprofessional spirit, grounded in the belief that dollars and cents, and nothing but this, is of value." The gradually changing conditions under which all pharmacists have been working during the past two decades may soon reach a climax under the external pressure of the War, and this article, prepared by a distinguished teacher and one long in close touch with these conditions, has a pertinent meaning alike to the seller of sundries and the dispenser of prescriptions.

TWO of our prominent pharmacists of National reputation have recently, under the caption of "Facing the Facts," declared in no uncertain terms that Pharmacy had "definitely and permanently entered upon a commercial era." One says in substance that in spite of all that college professors, writers, and lecturers, who are upholding the professional spirit, may do and in spite of the scientific and technical training provided in the college curriculum, it is as useless "to stem the tide of commercialism in Pharmacy as it would be to attempt to sweep back the ocean with a broom."

Another of the writers asks whether this commercialism is "the inevitable result of the development from a simple into a complex and specialized state of society, which it would be useless to oppose?"

The question is: Do these gentlemen face the facts as they would have us believe?

Can it be that the above figure literally represents the conditions that obtain today in American Pharmacy? Let us face the polygon of fact from another angle. The above writers have seemingly been looking at only one side of this polygon; we will not deny that they have grounds for the position they take. No one can dispute the fact that commercialism has made inroads into our profession, and serious inroads they are, threatening the foundation of our vocation. Commercialism took its beginnings in a natural and inoffensive way when the old ethical pharmacy ceased to grow and develop as it should. We find these small beginnings taking form when the pharmacist found that something must be done besides selling drugs and filling prescriptions in order to maintain himself. This type of commercialism was not dangerous because there still remained a true professional spirit behind it. But the commercialism of the above writers appears to be of a different sort; it shows rather too much of the spirit of Mammon and to be entirely devoid of the spirit of professionalism. This form of commercialism supports a merchandising that looks upon drugs and medicines as a mere side line, as an incident rather than an end in itself. It takes the good name of Pharmacy and under the guise of its respectability builds for itself a business enterprise wholly unrelated to Pharmacy.

Can it be that these writers will insist that this is the accepted Pharmacy of today? Is it not rather a horrible ghost of a Pharmacy? We do not believe that a 98% side-line, 2% drug business "is the inevitable result of the development from a simple into a complex and specialized state of society which it would be useless to oppose." Or that it "is a natural and evolutionary change." It is rather the result of an irresponsible, unscrupulous, and unprofessional spirit, grounded in the belief that dollars and cents, and nothing but this, is of value. We should not be surprised to see this spirit appear in a still more grotesque form. Why should it stop here? Side lines are at present so numerous that we may as well add a few more until there is nothing left of Pharmacy but the insignia over the door. When this is accomplished we may "for once and for all get rid of the fantastic and snobbish notion that so-called professional Pharmacy is the only kind of Pharmacy worth cultivating."

There is but one kind of Pharmacy and that is professional Pharmacy. This is the fact that we should face and recognize. It need not necessarily be the old ethical Pharmacy of years past, but it must concern itself with professional matters and deal with them in a professional spirit. We must support and maintain this spirit. We *will* "push the ocean back with a broom" and will count on the loyalty of the earnest pharmacist to lend his hand in the struggle. In the accepted Pharmacy of today the predominant note is not commercial in the sense in which it has been indicated by the above authors nor must it be allowed to become so. Progressive Pharmacy is not purely commercial Pharmacy. When it so becomes, Pharmacy is dead.

The Candelilla grows abundantly throughout the northern part of Mexico, and the wax that is obtained from it is frequently used in the preparation of various kinds of leather greases and lubricants, and in the manufacture of disks for phonographs.

Buttermilk in powdered form has been prepared by a new process worked out after careful experiment in a plant at Omaha, Neb. Buttermilk powder is used by bakers in making bread and other food products.

Reciprocal Registration

Increasing Uniformity of Requirements of State Pharmacy Laws

By H. C. CHRISTENSEN,
Secretary National Association of Boards of Pharmacy

The announcement that the National Association of Boards of Pharmacy has recently secured in Chicago a new home becoming its dignity, an office properly equipped to handle the constantly increasing mass of work done by the executive heads of the organization, serves to call attention to the fine accomplishments of the Association during its existence towards securing uniformity in the requirements governing the practice of pharmacy in the various states, making now possible reciprocal registration to the pharmacists of forty states. No man has been more actively engaged in this important work than H. C. Christensen who, in his official capacity as secretary of the central national body, has, during the year just past, visited the boards of pharmacy of fourteen states. What he has to say about the work done by the Association in general, and by his office in particular, will surely be read with great interest by pharmacists.

I AM glad to take this opportunity to announce that the National Association of Boards of Pharmacy now has a real home in the form of two adequately equipped office rooms (312-13) in the up-to-date office building of the People's Life Insurance Company, 130 North Fifth avenue, Chicago. This is a central location convenient of access in what is known as the "loop" district, and within two to three blocks of The LaSalle, Sherman House, New Morrison and other leading hotels.

While it may not be generally known, it is a fact that for the past three years, since I have been Secretary of the Association, I have donated, free of charge, office space in my residence apartment, 450 Bowen avenue, as well as typewriter, desk, reference books, etc. I did this willingly believing the cause of a worthy one and also, feeling certain that plans adopted by the N. A. B. P. would eventually bring in sufficient revenue to warrant the establishing of a permanent down town office. It is therefore with much pleasure that I make the above announcement.

When you stop to think that the National Association Boards of Pharmacy was organized in 1904-05 you will realize that the accumulation of records up to this time amounts to a considerable volume. When I say I have moved into the new office, it would be more precise to say that I am still moving. As fast as we can find time to do so we are sorting and filing systematically, beginning with the older accumulation of records first.

We are also planning to sort old files of the thirty some odd drug journals that come to this office and to have at least the leading ones bound for filing in the archives of the Association. Then, also, provision is being made for systematic filing of Government documents of interest; pharmacy laws of the various States; prospectuses and other information regarding schools and colleges of pharmacy; boards of pharmacy examination questions; tabulations of reciprocal registrations in member States of the association; records of educational and professional training of candidates appearing for examination in all States, etc., etc., (a supply of cards like the enclosed has been sent to every Board of Pharmacy in the U. S. and are being returned to this office after being filled in by candidates after each examination). Such statistics are most valuable.

State of ______________ Age ______ Date ______________

Name ______________________________ Place of Birth ______________

____

EXAMINATION FOR REGISTRATION { Registered Pharmacist ______
Check one you are taking { Assistant ______

PRELIMINARY EDUCATION
State number of years spent in the following:

Grammar School, years ______ Name of School ______________

High School " ______ Name of School ______________

College (not pharmacy) ______ Name of College ______________

Preparatory School ______ Name of School ______________

Private Instruction ______ Kind and Extent ______________

____

PROFESSIONAL TRAINING

Pharmacy School, years ______ Name of School ______________

Did you Graduate? ______ Degree Received ______________

Drug Store Experience, years ______ Name State or States in which this experience was received

____

All information is systematically filed in the Secretary's office; a supply of blank cards like the above is sent to every board of pharmacy to be filled out and returned by candidates after each examination.

When it is considered that in addition to work in connection with matters as above mentioned, the mail received by this office requiring attention amounted to something over 8,000 pieces during the past year, covering enquiries regarding requirements for reciprocity, etc., requests for reciprocal application blanks; general correspondence with officers and members of the Association; correspondence with boards of pharmacy and individual board members pertaining to examination methods and questions; correspondence with board and State association members in the various States with regard to legislation, in many instances furnishing drafts for amendments, passing on and making suggestions with regard to drafts of complete pharmacy laws and qualifying as expert generally on matters pharmaceutic, you may know that I am kept fairly busy.

My daughter, Miss Vera, 22 years old, is my stenographer and office assistant. She thoroughly enjoys the work, and has developed remarkable aptitude for details and insight into the affairs of the office. With me personally I am intensely interested in the association and my only regret is that I find it a physical impossibility to keep up with my work as well as I would like. In addition to the office work I put in full two months of time during the past year attending meetings of Boards of Pharmacy in various States. I visited with fourteen Boards during the year.

Forty States are now included in the *active* member list of the National Association Boards of Pharmacy which means that the registered pharmacists (licentiates) of those States, may avail themselves of reciprocity, provided registration in their home State was secured by successfully passing an examination before the board of pharmacy. The States included in the *active* member list between which general reciprocity is in force are as follows:

Alabama, Arizona, Arkansas, Colorado, Connecticut, Delaware, District of Columbia, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Mexico, North Dakota, Oklahoma, Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, West Virginia, Wisconsin.

The National Association Boards of Pharmacy, without a doubt, is, and will more and more become a leading factor in the progress and advancement of pharmacy as a profession.

Clinical reports seem to favorably substantiate the estimate of the therapeutic value of both flavine and brilliant green as antiseptics in the treatment of infected wounds (*British Medical Journal*). Flavine is diamino-methyl-acridinium chloride, was originally prepared by Banda at the desire of Ehrlich, and has been found to have a very marked therapeutic effect in trypanosome infections. It is stated that a 1:1000 solution of flavine (equivalent on the basis of bactericidal concentration to an 80 per cent. solution of carbolic acid in the case of staphylococci) has been applied to the surface of wounds without causing pain or local irritation, and the skin has not been harmed by its use. Flavine is stated to possess extremely powerful bacteriological and antiseptic properties, which are enhanced rather than diminished by admixture with serum, in this respect differing from all powerful antiseptics in common use.

Modern Uses of Magnesium

Magnesium in ribbons or coarse powder has been used in making qualitative tests for phosphorus and in the form of rods or ribbon in the determination of potash, but in recent years or since the beginning of the war it has been extensively employed in making munitions. It does not enter into explosives nor into arms as an integral part, but small quantities are put in shrapnel shells in order that observers and gunners may know exactly where the shells are bursting. By day the burning magnesium gives a dense pure-white cloud of magnesium oxide that can be readily and distinctly seen, and at night it gives a dazzling white light. Larger quantities are used in aerial bombs and rockets employed for lighting up the country at night. A small quantity of magnesium is also used in fireworks for peaceful displays, the brilliant white light and the trailing clouds of white oxide giving very beautiful effects. A number of tons are used each year for flashlights for photographic purposes, mostly in the form of a powder which must pass through a 200-mesh screen, otherwise it will not burn readily enough. Among the uses of magnesium to which manufacturers look forward are its employment as a deoxidizer in steel, and also to replace aluminum, in part, in automobiles and airplanes.

SUGAR REQUIREMENTS FOR 1918

The committee consisting of representatives of the allied industries: W. F. Meyer, Wm. T. Phillips, A. H. Van Gorder and A. R. Brunker, chairman, representing the American Bottlers' Protective Association, the National Manufacturers of Soda Water Flavors, the Compressed Gas Manufacturers Association, the Soda Fountain Manufacturers, the Fruit and Syrup Manufacturers, and related industries, appointed at a meeting held in Chicago on Nov. 23, held a conference with the Food Administration in Washington on Dec. 11, and as a result thereof, has issued a statement in which it says that the Committee feels safe in saying that if the individual consumers throughout the country will observe the requests of the Food Administration as to economy in the use of sugar, it will be possible to give all the sugar using industries practically the normal requirements of this commodity to carry over the coming year. Any curtailment, it is believed, will not prove serious, although this is subject to future contingencies. From a patriotic and business standpoint it is the duty, the committee urges, of all to promote in every way the Food Administration campaign.

A. Ph. A. OFFICERS FOR 1918-19

The board of canvassers have reported the results of the election of the American Pharmaceutical Association as follows:

President, Charles H. LaWall, of Philadelphia; 1st vice-president, F. W. Nitardy, of Denver, Colo.; 2nd vice-president, Theodore J. Bradley, of Boston; 3rd vice-president, Francis Hemm, of St. Louis, Mo.; members of the council, Caswell A. Mayo, of New York, Charles E. Caspari, of St. Louis and Charles Holzhauer, of Newark, N. J. Mr. Holzhauer's death was announced shortly after the election, which was held in November, the members voting by mail.

Official British Sugar Substitutes

War Emergency Formulary Approved With Force of Legal Standards

By Our London Correspondent

IN my notes published in THE ERA of October, I dealt with the action of the General Medical Council in withdrawing from the British Pharmacopoeia preparations containing sugar and glycerin without providing any alternative formulas; and I showed how this action was likely to lead to confusion since one pharmacist would dispense a prescription with a sugar or glycerin-containing preparation, while another would dispense it with a preparation containing neither of these substances. Obviously there was need for new standards in order to secure uniformity in dispensing. This need has now been met by the publication of a War Emergency Formulary containing formulas for 130 preparations which formerly contained either sugar or glycerin. This Formulary has been published by the Pharmaceutical Society as an Addendum to the British Pharmacopoeial Codex and has been approved by the National Health Insurance Commissioners and the British Medical Association. The formulas will have the force of legal standards and doctors will be expected to prescribe and pharmacists dispense accordingly.

SOME OF THE NEW FORMULAS

Generally speaking, the principal substitutes for sugar are; (1) diluted glucose containing 90 parts of glucose and 10 of distilled water, and (2), an artificial syrup or syrup substitute known as "Syrupus Factitius" composed as follows:—

Tragacanth	0.7
Chloroform	0.5
Distilled water to	100.0

Curiously enough, no use has been made of saccharine; in certain preparations this substance would no doubt be unsuitable, but there are cases in which a more palatable preparation could be made by utilizing this powerful sweetening agent. As regards glycerin, the difficulty has been overcome in some cases by leaving out the glycerin, in others by using alcohol and in others, by using mucilage of tragacanth. The following are some of the new formulæ:—

Caffeine Citras Effervescens

Sodium bicarbonate	60
Tartaric acid	35
Citric acid	18
Caffeine Citrate	4

Confectio Sulphuris

Precipitated sulphur	45
Acid potassium tartrate	11
Syrup of orange (new formula)	44

Elixir Simplex

Tincture of orange	7.5
Chloroform	0.5
Diluted glucose	40.0
Distilled water to	100.0

Mix the diluted glucose with an equal volume of distilled water; add the tincture of orange and the chloroform; shake well; add a little kaolin and sufficient distilled water to complete the required volume; shake well; set aside for 24 hours and filter.

Emulsio Olei Morrhuae

Omit the syrup.

Glycerinum Acidi Carbolici

Phenol	5.0
Tragacanth in powder	0.7
Chloroform	0.5
Distilled water to	100.0

Dissolve the phenol in 90 of distilled water. Add the solution to the tragacanth previously suspended in the chloroform, and finally, distilled water to complete the required volume.

Note:—This preparation is less viscous and more readily absorbed than that made with glycerin; the strength has therefore been diminished.

Glycerinum Acidi Tannici

Acid tannic	10.0
Tragacanth in powder	1.2
Chloroform	0.5
Alcohol	2.0
Distilled water to	100.0

Dissolve the tannic acid in 90 of distilled water. Mix the chloroform with the alcohol and suspend the tragacanth in the mixture. Add the solution of the tannic acid and then sufficient distilled water to complete the required volume. Here again this preparation is more readily absorbed than when made with glycerin; the strength has therefore been diminished.

Glycerinum Amyli

Potato starch	5.0
Tragacanth in powder	0.5
Alcohol	2.0
Boric acid lotion B. P. C.	95.0

Mix the tragacanth, alcohol and boric acid lotion to form a mucilage. Through this diffuse the potato starch and heat till a translucent jelly is formed.

Glycerinum Boracis

Tragacanth in powder	1.2
Chloroform	0.5
Boric acid lotion B. P. C. to	100.0

Mix the tragacanth with the chloroform, and add the boric acid lotion.

Glycerinum Pepsini

Pepsin	10.00
Hydrochloric acid	1.15
Distilled water	22.50
Alcohol (20 per cent.) to	100.00

Add the pepsin to the distilled water previously mixed with the hydrochloric acid and 70 of the alcohol. Set aside for a week shaking occasionally, then decant or filter and add sufficient of the alcohol to complete the required volume.

Magnesii Sulphas Effervecens

Magnesium sulphate	50
Sodium bicarbonate	42
Tartaric acid	22
Citric acid	15

Mel Boracis

Borax	10
Purified honey	90

Mistura Amygdalae

Compound powder of almonds	10
Distilled water to	100

Triturate the powder with a little distilled water to form a thin paste; gradually add the remainder of the distilled water; strain through muslin.

Pulvis Tragacanthae Compositus

Tragacanth, in powder	15
Gum acacia, in powder	20
Starch, in powder	65

Sodii Citro Tartras Effervescens

Sodium bicarbonate, in powder	59
Tartaric acid, in powder	34
Citric acid, in powder	18

Syrupus Aromaticus

Tincture of orange	25
Cinnamon water	25
Syrup substitute	50

Mix the tincture of orange and cinnamon water, filter through talc, and add the syrup substitute.

Syrupus Aurantii

Tincture of orange	10
Syrup substitute to	100

Syrupus Cascarae Aromaticus

Liquid extract of cascara	40.00
Tincture of orange	10.00
Oil of cinnamon	0.05
Diluted glucose to	100.00

Syrupus Limonis

Citric acid	1
Tincture of lemon	10
Syrup substitute to	100

Syrupus Rhei

Liquid extract of rhubarb, B. P. C.	7.00
Oil of coriander	0.05
Syrup substitute to	100.00

Syrupus Rhoeadus

Red poppy petals	26.00
Distilled water	a sufficiency
Tragacanth, in powder	0.5
Chloroform	0.7

Syrupus Tolutanus

Solution of tolu, B. P. C.	12.5
Syrup substitute to	100.0

Tinctura Cardamomi Composita

Prepare as directed for Tinctura Cardamomi Composita, B.P., but omit the glycerin and use alcohol (60 per cent.), in the place of alcohol (45 per cent.).

Tinctura Kino

Prepare as directed for Tinctura Kino, B.P., but omit the glycerin.

Tinctura Pruni Virginianae

Wild cherry bark, in No. 20 powder	20
Alcohol	60
Distilled water	40

Mix the powder with the water, set aside for 24 hours, add the alcohol, and complete the maceration process.

Tinctura Rhei Composita

Prepare as directed for Tinctura Rhei Composita, B.P., but omit the glycerin and use alcohol (60 per cent.), in the place of alcohol (45 per cent.).

Unguentum Iodi

Iodine	4
Potassium iodide	4
Distilled water	4
Prepared lard	88

Dissolve the iodine and potassium iodide in the distilled water, and incorporate the solution with the prepared lard.

Unguentum Resorcini

Resorcin	12.5
Distilled water	12.0
Wool fat	20.0
Soft paraffin	55.5

Dissolve the resorcin in the distilled water, and incorporate the solution with the wool fat and soft paraffin.

SALE OF ALCOHOL BY NEW YORK DRUGGISTS

Secretary Warren L. Bradt of the New York Board of Pharmacy sends the Era a copy of the following ruling rendered by the New York State Department of Excise with reference to the sale of alcohol by druggists of this State:

STATE DEPARTMENT OF EXCISE

Albany, Dec. 11th, 1917.

Warren L. Bradt, Esq.,
Secretary N. Y. State Board of Pharmacy,
Education Building, Albany, N. Y.

Dear Sir:

We beg to acknowledge receipt of your letter of the 7th inst. in which you ask:

"In view of the recent ruling of the Internal Revenue Department that alcohol cannot be sold by pharmacists unless it is denatured to such an extent that unfits it for beverage purposes and requires that the bottle or package shall bear a poison label, is it necessary for pharmacists, who use alcohol as a solvent or preservative for preparing medicinal preparations and sell it only denatured in the manner prescribed by the Internal Revenue Department, to obtain a sub-division 3 certificate?"

We beg to advise you that it is not necessary for a pharmacist who uses alcohol only as a solvent or preservative, to obtain a subdivision 3 certificate. About this there can be no question because alcohol may be legally possessed by pharmacists under the exception contained in subdivision "P" of section 30, for the purposes mentioned in towns where no form of liquor tax certificate may be legally issued. Alcohol, we think, may be sold by a pharmacist who holds no liquor tax certificate, if it has been denatured in accordance with any one of the ten formulae set forth in the ruling of the Commissioner of Internal Revenue under date of October 10th.

Very truly yours,

(Signed) H. D. Sanders, Chief Counsel

PROF. JOS. P. REMINGTON

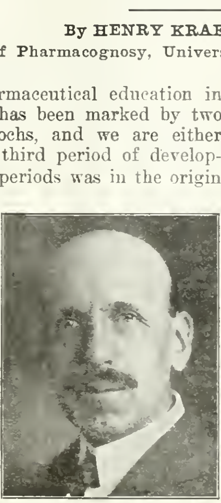
During the printing of this issue, word was received by the Era of the death, in Philadelphia on Jan. 1, of Prof. Jos. P. Remington, for many years chairman of the Revision Committee of the United States Pharmacopoeia, and dean of the Philadelphia College of Pharmacy. He was 70 years of age and had been in failing health for some months. An extended notice of Prof. Remington and his work will appear in our next issue.

University Instruction in Pharmacy*

Advent of A. B. Prescott Marked New Epoch

By **HENRY KRAEMER**, Phar.M., Ph.D.
Professor of Pharmacognosy, University of Michigan, College of Pharmacy.

THE history of pharmaceutical education in the United States has been marked by two clearly defined epochs, and we are either in or about to enter the third period of development. The first of these periods was in the origin of the independent colleges of pharmacy, and of these the Philadelphia College of Pharmacy accepted the leadership in 1821. In order to refresh your memory I may say that the University of Pennsylvania had previously instituted a course in pharmacy on the completion of which the candidates were to receive the degree of Master in Pharmacy. This action on the part of the University aroused a number of the older pharmacists of Philadelphia, who believed that their privileges were being usurped by a university institution and that their domain was being threatened. It was Peter Lehman who visited the store of Henry Troth and said, "Henry, it will not do to have the teachers of the University take our boys from the stores at noon and make M.P.'s of them. Let us encourage the development of a College which shall be conducted by pharmacists, composed of teachers who are pharmacists, and in the interests of pharmacy."



HENRY KRAEMER

The reason for the objections of the pharmacists to the University method of education was that it took the clerks from the stores during the day time, when they could not very well be spared and furthermore it was looked upon that the authority for the conduct of the drug business might be taken outside of the realm of pharmacy. The same sort of arguments we find have been advanced again and again during the past century and have had much to do in preventing the disinterested progress of American pharmacy as compared to the other professions. The subject of education was not considered from the benefits to the apprentice, but rather with the view of controlling the practice and development of pharmacy and looking to the financial interest of the retail druggist.

The view of the Quaker pharmacists was generally accepted and supported by the pharmacists throughout the United States, and with the establishment of the Philadelphia College of Pharmacy in 1821, other independent colleges of pharmacy were founded in the principal centers of population as New York, Boston, Baltimore, Chicago, etc. In each of these schools the members selected their own officers and governing board and the selection of the faculty was left to the judgment of what is known as the Committee on Instruction. The Board of Trustees prescribed the fees for the students, made arrangements for the teaching facilities and determined the salaries of professors and instructors. The colleges were supported entirely from the fees of students and it can be readily seen that the amount of instruction was regulated to a large degree by the price for tuition. These colleges were independent because they were outside of the jurisdiction of the other educational institutions. The word independence probably had a greater significance then than now and no doubt had become a kind of fetish in certain quarters. But these institutions were handicapped in that the members and trustees were primarily business men, who might be very well versed in commercial problems, but whose knowledge of educational work was for the most part quite limited. It is true that we find in all of these old line colleges men of exceptional attainments, and some who even have manifested scholarship. In only very rare instances however do we find that the members generally fully appreciated that a college of pharmacy was an educational institution and as such must be connected with a general system, having a vital concern on the one hand with the development of secondary education and on the other with the trend of University and College work.

Beginning of University Instruction

The second period in the history of American Pharmacy was when in the chemical laboratory of the University of Michigan there was developed a systematic course of pharmaceutical instruction. While these courses were given as early as 1860 they did not become part of the regular curriculum until 1868 when a course in pharmacy was established, and it was directed that on the completion of the prescribed work the degree of Pharmaceutical Chemist was to be conferred.

When the rumors of this new product of the Golden West reached the ears of the old line pharmacists there immediately developed some discussion and an opposition became manifest. E. H. Sargent of Chicago, as President of the American Pharmaceutical Association in 1870, took up the question of the Universities giving pharmaceutical courses and said: "This being the only national organization of pharmacists and supposed to take cognizance of whatever relates to pharmacy, it may be well to consider the innovation and place upon record our opinion of this with the purpose of influencing the action of such schools in the future." The point which was made by Mr. Sargent was that the teachers of pharmacy in the universities were ignorant of pharmacy and did not possess the necessary qualifications for the teaching of pharmaceutical apprentices. He furthermore pointed out that if such educational institutions, as the universities, gave instruction in pharmacy the independent colleges would be compelled to close their doors. He called upon the members to defend themselves until such time as legislation could be obtained to protect these colleges.

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* Address at the first meeting of the Prescott Club of the University of Michigan. Contributed by the author.

The next year however in 1871 Prof. A. B. Prescott of the University of Michigan presented a paper to the American Pharmaceutical Association on "Pharmaceutical Education" and gave reasons why the Universities with propriety might give courses of instruction in pharmacy. This paper is well worth the attention of pharmacists generally today. It is a clear statement of the value of didactic and genuine college or university instruction for pharmacists as well as for engineers, miners, agriculturists, and all others whose vocations require the application of knowledge of the sciences. He called attention to the fact that not one of the colleges of pharmacy which the American Pharmaceutical Association represented had ever required laboratory training either before apprenticeship or before college graduation. The year 1871 and especially the month of September will stand out memorably in the history of pharmaceutical education with Dr. A. B. Prescott as the David of his time, facing a Goliath representing the joint authority of all the old line colleges of pharmacy. It is interesting to read the Proceedings of the American Pharmaceutical Association of that time and go over the list of names of those leaders who would not recognize the department of pharmacy of the University of Michigan, and who returned the credentials of Dr. Prescott to him.

It has been said that he is a strong man who can sheathe his sword while he bares his breast and this was true of the great Prescott. He had seen service in the Civil War and a courageous leader he proved himself to be. Dr. Prescott did not find fault and engaged in no vituperation. He devoted the rest of his life in building up a great College of Pharmacy as a part of a University, knowing fully well that in time the principle to which he had given voice would be generally accepted by the pharmacists of the United States, and would probably lead ultimately to the establishment of a real profession of pharmacy in America. Dr. Prescott then did the most natural thing that a man of great strength of character would do. He engaged in original scientific work and upon which there could be no debate, demonstrating to the pharmacists of the United States the latent power and resources which were at the command of trained men. It was in 1872 that Dr. Prescott presented his first pharmaceutical paper to the American Pharmaceutical Association, which was entitled "An Analysis of Glacial Phosphoric Acid of Commerce." Dr. Prescott continued in his scientific work and was well satisfied that he had presented his views on education to the American Pharmacists in the paper already referred to. His attitude was very admirable and he had no words of reproach for those who opposed him. He would not condemn the men who did not possess the keen insight to see the inevitable trend of pharmaceutical education.

Soon after the University of Michigan instituted a course in pharmacy many of the other Universities followed with similar courses until today it is a well established principle that there is a decided advantage in a college of pharmacy becoming a part of a great educational system. The advantage being in part, as was first pointed out by Dr. Prescott in 1871, that the student of a University receives something of the professional enthusiasm and stimulus due to his contact with the men of other departments of the university.

It was to be expected however, that a man of Dr. Prescott's genial nature and strength of character would receive in the course of his own life time the recognition which his work as a pioneer in pharmaceutical education so richly deserved. In 1899 Dr. Prescott was made President of the American Pharmaceutical Association and at the time of the organization of the American Conference of Pharmaceutical Faculties in 1900 he was made its first president.

Research Work in Pharmacy

If the results of Dr. Prescott's analysis of the situation in pharmacy in 1870 justify our recognizing him as a great leader it might be well for us to peruse his expressed thoughts in his published papers to see if he at any time indicated the possible direction that pharmacy would take. In his address as President of the American Pharmaceutical Association there is a golden thought which is almost covered up by the other matters considered in that address. He said, "Research came out of pharmacy in the last century and will return there in the next." Dr. Prescott had in mind the splendid contributions to science which had been made by that galaxy of brilliant intellects of the first order, who had either been apothecaries or served as chemists assistants, namely Scheele, Serturner, Liebig, Davy, Dumas, Pasteur, and others. At this critical period in the history of pharmacy we may well ponder over these words of Dr. Prescott and endeavor to understand the relation of research and the spirit of original investigation to the development of any profession. We may inquire what would be the standing of any one of the sciences or professions if it were not for the original investigations which are reported almost daily as coming from those devoted to the pursuit of these various callings. Is it not true that the standing of any science or profession is influenced in large part by the number and extent of original investigations that are made? If there are no large and vital subjects of inquiry that are engaging the attention of its votaries the natural conclusion is that science or profession has very little interest, and thinking men as well as the public are likely to judge its value and contribute to its support accordingly. On the other hand we have seen how by the presentation of innumerable questions of interest which are then taken up and solved by men of research that many new departments of science have been added during recent years. As a result of this activity on the part of research workers we see on every hand encouragement given to those who can show that their work is deserving of support. The question may well be asked. What is the matter with pharmacy? and the answer lies with the pharmacists themselves. Is not our general conduct such that the onlooker must conclude that there is nothing for the retail pharmacist to do except to handle the products which are made by the manufacturer for the use of the physician? The average drug store does not reveal, even to the physician, that there are opportunities for displaying initiative in work of a professional character. And to parents who are contemplating careers for their children it is not apparent that there is any relation between an intensive college education and the practical conduct of the drug business. Is it not almost self-evident, because of our conduct of pharmacy, that the impression should gain abroad that the physician is the directing power back of all pharmaceutical progress? If this is not the case, why should it be so difficult for us at this time to establish a Pharmaceutical Corps in the Medical Department of the Army? Have we not so conducted our profession that it would seem that anyone with a few months training might qualify as a dispenser of drugs? We know at the heart of things that this assumption is erroneous, but we cannot blame anyone except ourselves for the state of affairs as it exists and this condition was inevitable because the rank and file of pharmacists fifty years ago could not look ahead and did not appreciate the fundamentals of pharmaceutical education. We are now reaping, at least in part, what was sown at that time. Today, however, the teaching institutions of this country are almost unanimous that pharmacy schools must become a part of a great educational system, and if we are to continue as a part of this system we must give increasing attention to research and our graduates must be able to initiate advances, make new discoveries and develop original processes of manufacture and perform all those duties, which the members of the other professions and applied sciences are doing.

A. B. PRESCOTT

This is a time in which all pharmacists in this country should give serious attention and consideration to the development of our profession. It means much to the success of our troops in this time of War and it will mean infinitely more to the health and longevity of the American people when this war is over. Let us gradually eliminate the evils of commercialization with which the pharmacists of the United States have become obsessed and which have threatened the very existence of our profession and may be a more insidious evil than the nostrum traffic has ever been. The present period in the history of our country is a time of reconstruction in the life of every individual. In every business and every profession there is an awakening and the development of a new order of conduct. I think that we generally appreciate that we have paid too dearly for the monetary success we have attained, and that the waste and destruction in the path of our achievement remove much of the glory of this epoch. Our young men and women are desirous of equipping themselves so that they can be prepared for the most efficient and the most glorious kind of service. The leaders of thought in this country are desirous of giving the instruction that shall equip our young men and women to do their work in the best manner possible avoiding the mistakes of the generations which have gone before. One can see in the faces of those who are entering pharmacy the desire to be enrolled in this the noblest of professions. They have ideals and they have visions of a newer pharmacy. They are willing to make sacrifices, and they have a right to hope that they are entering upon a profession which has a real standing in the eyes of the public and a dignity equal to that of the engineer, architect and agriculturist. While it is true that not all of those who enter the profession of pharmacy are capable of taking the initiative or likely to manifest the spirit of research, yet it is in this kind of an atmosphere that they are best instructed and developed. It is in this kind of an environment that powers of excellence of the student are likely to be expanded and see fruition in the lives of graduates.

It seems to me that with the manifold activities which are manifest in the various pharmaceutical associations in the United States that we are probably just at the beginning of the era depicted by Dr. Prescott. This is a day of sacrifice and of self-denial, and everyone engaged directly or indirectly in pharmaceutical work should be willing, as rapidly as possible, to give up every line of endeavor which may in any way conflict with our professional ideals and prevent our progress in the development of a pure profession in which its votaries shall practice strictly the science and art of pharmacy.

I do not see how we can view the young people of our land and not feel stirred to the very depths in our desire to help them. In a cartoon in one of the newspapers there is depicted a little lad, dressed as a Naval Reserve, and having a toy boat at his feet. His wonderful and inspiring face is upturned and on his lips are the words, "I am only playing Jackie now, but I am getting bigger every day." It seems to me to depict the energy and ambition of every youth in this broad land of ours. It equally represents the apprentice in pharmacy who is full of resolution and expects on graduation from college and registration by the Board of Pharmacy, that he can do his part for his country and humanity.

New Books for Pharmacists

THE PRACTICE OF PHARMACY. A treatise on the modes of making and dispensing official, unofficial, and extemporaneous preparations, with descriptions of medicinal substances, their properties, uses and doses. Intended as a handbook for pharmacists and physicians and a text-book for students. Sixth edition. By Joseph P. Remington, Ph.M., Phar.D., F.C.S., chairman of the Committee of Revision of the Pharmacopoeia of the United States of America; dean, professor of theory and practice, and director of the pharmaceutical laboratory, in the Philadelphia College of Pharmacy, etc., assisted by E. Fullerton Cook, P.D., associate professor of operative pharmacy and instructor in commercial pharmacy in the Philadelphia College of Pharmacy, etc. 8 vo., 1987 pages, buckram, $8; bound in two volumes, cloth, each $4.50. Philadelphia, J. B. Lippincott Co.

As one goes back over the several editions of Remington's "Practice of Pharmacy," he becomes aware of the many changes that pharmacy has undergone since the first edition of the author's work was issued in 1885. The status of the Pharmacopoeia and National Formulary is now that of the law of the land, and the present day pharmacist is in daily contact with official standards, new remedies, biological products, assay methods, and other innovations in a way that the pharmacist of the early eighties knew not of. And if the various editions of the Pharmacopoeia have indicated the advances that pharmacy has made, this volume of Remington to a greater extent shows the details and direction that pharmaceutical education has taken in the endeavor the author has made to give pharmacists the important facts of present day practice.

The work is divided into six parts, each receiving exhaustive treatment. Part I is devoted to Metrology and the descriptions and comments on General Processes; Part II, Official Pharmacy and the Classification of Official Preparations; Part III, Inorganic Substances; Part IV, Organic Substances; Part V, Magistral Pharmacy; Part VI, Formulary of Unofficial Substances, Glossary of Uncommon Names, Terms or Substances, etc. It is noted that Part V has been extensively enlarged by the addition of new articles on sterilization, ampul filling, tablet making, etc., with numerous new cuts of apparatus with descriptions. Also of interest are the condensed charts of inorganic chemical substances, vegetable official drugs, and animal substances, which effectively group together subjects of a kindred character, thus aiding the student in grasping a large number of related facts.

The book is well printed, and the more than 600 illustrations have been revised by the author's son, J. Percy Remington, B. S., P. D., most of the outline drawings having been made by him. While the sixth edition is published for general use in one volume, it is also for the convenience of students issued in two volumes, the second volume beginning with inorganic chemicals.

BULLETIN NO. 110, Hygienic Laboratory, United States Public Health Service. Washington, Government Printing Office.

This bulletin contains four papers by members of the laboratory corps of the Hygienic Laboratory embodying the following studies: The Standardization of Antityphoid Vaccine, by George W. McCoy, director; A Colorimetric Method for the Estimation of the Cresol or Phenol Preservative in Serums, by Elias Elvove, technical assistant; Toxicity of Certain Preservatives Used in Serums, Viruses and Vaccines, by James P. Leake, passed assistant surgeon, and Hugh B. Cobbitt, sanitary bacteriologist, and Observations on the Significance of Antisheep Amboceptor in Human Serum, with Reference to Complement Fixation Test for Syphilis, by Mather H. Neill, passed assistant surgeon.

ESSENTIALS OF VOLUMETRIC ANALYSIS. An introduction to the subject, adapted to the needs of students of pharmaceutical chemistry. By Henry W. Schimpf, Ph.G., M.D., professor of analytical chemistry in the Brooklyn College of Pharmacy. 3rd edition, rewritten and enlarged. 5½ x 8 inches, 366 pages, cloth, $1.60 net. New York, John Wiley & Sons, Inc.

The exhaustion of the second edition and the appearance of the new United States Pharmacopoeia are the reasons given by the author for issuing a third edition of this work. As in previous editions, the subject matter is systematically arranged as far as can be, the processes being grouped under five headings: Neutralization, oxidation, indirect oxidation and iodometry. The principles underlying each group are definitely indicated, and their application illustrated by numerous examples. Methods of calibration, preparation and standardization of volumetric solutions, indicators, etc., are thoroughly explained, while many new assay processes have been introduced, such as the assay of mercuric salts, phosphates and hypophosphites by means of standard sulphocyanate solution; assays of chlorates, perborates, chloral, acetone, resorcinol, phenylsulphonates, arsenates, and alkali cacodylate.

THE PHYSICIAN'S VISITING LIST (LINDSAY & BLAKISTON'S) FOR 1918. Philadelphia. P. Blakiston's Son & Co.

This Visiting List has been familiar to physicians of the country for nearly three-quarters of a century, the volume before us marking the 67th year of publication. As in former years, it aims to give such ready-to-hand information as the physician is most likely to need, such as a calendar for 1918 and 1919, utero-gestation table, American table of mortality, treatment of poisoning, weights and measures, comparison of thermometers, table of signs, dose table, U. S. P. (1916), isolation periods in infectious diseases, height and weight table, etc., besides blank leaves for memoranda, carrying such headings as addresses of patients, and nurses, accounts, obstetric and vaccination engagements, records, records of births, deaths, etc. Like that of preceding years, this list is furnished in three editions, regular, perpetual and monthly, ranging in price from $1 to $2.50, according to size and style.

THE CHEMIST AND DRUGGIST DIARY 1918.

This volume marks the fiftieth of the series of "diaries" issued by the publishers of the London *Chemist and Druggist* to their subscribers, a reference work which has always been much sought after by British pharmacists. The present issue, however, differs considerably in form from the volumes which have preceded it, the changed form being the direct result, as the publishers explain, of the regulations of the Royal Commission on Paper, which limits the amount of paper that periodicals may use in the present method of conserving stocks and tonnage. The particularly interesting and useful division known as the "Buyer's Guide" this year follows the "directory section," being compiled as a classified list of articles which is alphabetically arranged, each article or product being followed by the manufacturers producing it. The literary contents are devoted to various kinds of information of interest to the drug trade, such as a "Chemists' Calendar" in which are given formulas for preparations and specialties for each month in the year; formulas for medicaments used in various military hospitals; stamp duties, schedules of poisons, comparisons of cost of drugs and chemicals during the war, and various regulations regarding prohibited exports, import duties, enemy firms in liquidation, etc., of interest to British chemists and druggists and in force during the prosecution of the war.

DRUG TRADE ROLL OF HONOR

In proportion to the number engaged in the profession, the drug trade has a right to feel proud of its members who have left the more peaceful walks of life and enrolled themselves in the active defense of their country. To them all honor is due, and in common with all citizens, The ERA feels grateful to them and takes pleasure in printing their names herewith, together with such other information as will show both their former connection with the trade and the grade and branch of the Government Service in which they are enrolled. We desire to make this "Roll of Honor' as complete as possible and to this end we invite the co-operation of all druggists. If any reader of The ERA knows of any one connected with the drug trade who has joined any branch of the United States military or naval forces in the war against Germany, he is requested to send such information to the Editor for publication in the ERA. We want the full name and address of the individual, his connection with pharmacy, when enlisted, and the branch of the service in which he may be engaged. Address Editor, The PHARMACEUTICAL ERA, No. 3 Park Place, New York.

Charles A. Paulsen, Dickson Drug Co., Portland, Ore.; pharmacist's mate, 3rd class, U. S. Naval Hospital, Bremerton, Wash.

Jim B. McCue, The Sunflower Pharmacy, Independence, Kas.; sergeant, 110th Engineers, Ft. Sill, Okla.

Sam'l Edward Goldenberg, J. Goldenberg, Hartford, Conn.; medical and surgical department, U. S. Navy, Charlestown Navy Yard, Boston, Mass.

William Perl, S. S. Bennet & Co., Inc., East Orange, N. J.; private Co. B., 114th Regt. Infantry.

Wynn L. Skelton, Ph. G., R. A. Turrel, Coleman, Mich.; sergeant, 14th Field Hospital, Ft. Oglethorpe, Ga.

Ross W. Prettyman, Highland Park Drug Co., Los Angeles, Cal.; corporal.

Herbert B. Foster, president Old Corner Drug Store Co., Belfast, Me., private, Co. C., Medical Department, Regular Army, 101st Reg. Engineers; in France.

W. Earl Sisson, Sisson's Drug Store, Decker, Hazleton and Oakland City, Ind.; aviator; address, A. S. S. E. R. C., Stamford, England.

Emory M. Moses, Thompson Drug Co., Weidman, Mich.; private, U. S. Motor Ambulance Co., No. 29, Camp Logan, Houston, Texas.

Jos J. Mee, Princeton Drug Co., Princeton, Minn.; sergeant, 125th U. S. Field Art. Hdqts. Co., Deming, N. M.

C. R. Johnson, West Side Pharmacy, Houghton, Mich.; sergeant Medical Department, Reg. Army, Marietta, Wis.

Paul M. Smith, B. B. Smith & Sons, Versailles, Ky.; 1st sergeant, artillery, Regular Army.

Leo C. Weber, Arlington Drug Store, Arlington, Neb.; 1st class private, Hospital Corps, Medical Department, U. S. A.

Mertie M. Bloom, Bloom-Sevier Drug Co., Tallulah, La.; dispenser, Infirmary of Field Artillery, Army.

Benjamin Rosenberg, N. Y. College of Pharmacy; 2nd lieut., Infantry, Camp Dix, Wrightstown, N. J.

Allen H. Bowie, J. W. Bowie, Covington, Va.; Hospt. sergeant, Base Hospital No. 45, Medical Depart., U. S. A.

Bert F. Mitchlee, Holland Drug Co., Holland, Texas; private, Ambulance Co. No. 12, Medical Dept., American Expeditionary Forces.

Charles D. McCarthy, Weld & Co., Auburn, N. Y.; private, Hospital Corps, Fort Slocum, N. Y.

Henry J. Waters, Weld & Co., Auburn, N. Y.; private, Hospital Corps, Spartanburg, S. C.

Clifton J. Muir, Stafford Drug Co., Marquette, Mich.; sergeant, Hospital, Medical Department, Port of Embarkation, Hoboken, N. J.

Walter J. Hird, Stanford Pharmacy, Newark, N. J.; corporal, Co. B, 113th Infantry, Anniston, Ala.

Ralph Spalding, La Pierre Drug Co., Cambridge, Mass.; private, Quartermaster's Dept.

John F. Horton, E. E. Boynton, Camden, Me.; private, Sanitary Dept., 101st Regt., 26th Div.

D. E. Wilhelm, Lynbrook Pharmacy, Kansas City, Mo.; 1st lieut., Ambulance Co. No. 1, of Missouri, Fort Sill, Okla.

Louis Guba, James A. Murphy, New Bedford, Mass.; private Med. Dept., U. S. Army.

Francis C. Reinardy, S. M. Reinardy & Co., Burlington, Wis.; corporal, Base Hospital No. 101, Medical Service, France.

Charles H. Allen, Allen's Pharmacy, Washington, N. C.; hospital apprentice, U. S. N. R. F., Charleston, S. C.

G. B. Macomber, George B. Macomber, Olive, Iowa; supply sergeant, Machine Gun Co., 133rd Infantry, Camp Cody, Deming, N. M.

John D. Sellon, Collins' Drug Store, Hart, Mich.; 2nd class seaman, U. S. N. rifle range, Camp Logan, Zion City, Ill.

E. I. Goldberg, Tsheppe & Riech Pharmacy, Inc., New York, N. Y., assistant pharmacist, U. S. Navy.

Oliver Mathis, Lowe Drug Co., Holdenville, Okla.; private, Hospital Service, Ft. Leavenworth, Kans.

Raymond W. Duschesnau, Fisk's drug store, Providence, R. I.; Quartermaster's Department, Fort Slocum, N. Y.

George L. Burroughs, Burroughs Bros., Boston Mass.; Medical Supply Department, Red Cross.

Everett L. Emery, drug store proprietor, Brockton, Mass.; Naval Hospital Corps.

Oscar L. Hemstad, Madison & Hemstad, Sandstone City, Minn.; Field Artillery.

James T. Bonner, druggist, Salt Lake City, Utah; 30th Regt. Engineers.

George W. Tippet, manager Central Drug Store, Sacramento, Cal.; Hospital Corps, U. S. Army.

Robert P, McKeogh, proprietor McKeogh's Pharmacy, Worcester, Mass.; Base Hospital, Medical Reserve Corps, Camp Devens, Ayer, Mass.

H. P. Haeney, former drug clerk of Philadelphia and Williamsport, Pa.; Hospital Corps, Headquarters, Fort Meade, Md.

Richard D. Stevenson, Robert Stevenson & Co., Chicago, Ill.; Ambulance Service, France.

Albert G. Kottenhoff, Alderman Drug Co., Hartford, Conn.; National Army, Camp Devens, Ayer, Mass.

Melvin L. Low, Carroll's Pharmacy, Winchenden, Mass.; Naval Medical Corps, U. S. Naval Hospital, Chelsea, Mass.

Carl J. Reeves, W. P. Reeves & Co., Pulaski, Tenn.; post pharmacist, Camp Sevier.

William J. Peterson, Benson, Smith & Co., Honolulu, Hawaiian Islands; pharmacist, Pearl Harbor Hospital.

Warren Churchill, Churchill Drug Co., Burlington, Iowa; Ordnance Department, U. S. A.

Guy Whitney, druggist, Lostant, Ill.; in training camp.

Werle E. Francke, druggist, Volga, S. D.; National Army, Camp Riley, Kans.

Howard E. Eichinger, J. M. Eichinger, Canby, Minn.; Medical Detachment, 151st F. A., 42nd Div., Camp Mills, N. Y.

A. L. Epstein, Waconia, Minn., druggist; Medical Department, 337th, F. A., Camp Dodge, Iowa.

George O'Brien, drug clerk, Wolf Point, Mont.; 40th Co., 10th Bat'n, 166th Depot Brigade, Camp Lewis, Wash.

Simon Yolish, Joseph Goldenberg, Hartford, Conn.; Medical and Surgical Division, National Reserve Corps, Charlestown Navy Yard, Boston, Mass.

Colleges of pharmacy throughout the country have been active in compiling lists of their students and graduates who have enlisted in the Government forces, and we print below the following lists sent by the various institutions named:

UNIVERSITY OF OKLAHOMA

Miller Thompson, Ph. G. '16, 358th Infantry Infirmary, Camp Travis, Tex.

George B. Shown, Ph. G. '18, 358th Infantry Infirmary, Camp Travis.

Reuben M. Burrow, Ph. C. '14, Medical detachment, Ft. Leavenworth, Kans.

Eugene L. Sutherland, Ph. C., Medical detachment, 340th Field Artillery, Camp Funston, Kansas.

J. J. McCartney, Ph. C. '01, Capt. U. S. Reserve, Ft. Reno, Okla.

Frank B. Patterson, Ph. G. '19, Medical detachment, 357th Infantry, Camp Travis, Texas.

William Weldon, freshman pharmacy student, U. S. N., Great Lakes Training Station, Chicago.

C. V. Nichols, instructor in pharmacy, Hospital Corps, Regular Army, Base Hospital, Fort Sill.

Howard S. Cain, Ph. C. '14, private Medical Department, 19th Field Artillery, Fort Sam Houston, Texas.

Claude Aikin, B. S. '17, lieutenant, Camp Pike, Arkansas.

A. B. Haas, Ph. C. '11, Medical Department, Fort Logan, Colo.

J. D. Haas, Ph. C. '11, Co. E. 7th Engineers, Fort Leavenworth, Kans.

W. Ross Gahring, Ph. C. '17, 1st lieut. Infantry section, unattached, American Expeditionary Forces, France.

Akard L. Hatcher, Field Hosp., No. 144, Camp Bowie, Texas.

Marvin G. Humphreys, U. S. Camp Hospital, Douglas, Ariz.

Harlin J. Fuller, 4th Infantry, 164th depot brigade, Med. Dept., Camp Funston, Kans.

Elmer L. Ray, Ambulance Co. No. 26, Ft. Clark, Texas.

Alex. F. Buckley, Co. I., 358th Infantry, Camp Travis, Texas.

Homer C. Washburn, former dean, major, 157th Infantry, Camp Kearney, Cal.

David M. Garland, 36th Sanitary Train, Camp Bowie, Texas.

Reuben G. Lewis, sergeant, 2nd battalion, Training Camp, Ft. Sheridan, Ill.

Richard H. Shriner, Co. 143, Field Hosp., Camp Bowie, Texas.

George L. Risen, Field Hosp., No. 143, Camp Bowie, Texas.

Ross A. Claire, Ambulance Co. No. 127, Ft. Clark, Texas.

Isaac Hosey, Field Hospital No. 16, Ft. Riley, Kansas.

Otto Rose, 358th Infantry, Camp Travis, Tex.

Floyd L. Yarbro, Post Hospital, Ft. Sill, Okla.

Leo T. Housh, Camp Funston, Kansas.

William Scott, Camp Travis, Texas.

Marquis J. Green, M. O. T. C., j-5, Ft. Riley, Kansas.

Frederick A. Jackson, U. S. N. Hosp., Great Lakes, Ill.

B. K. Jennings, Co. 28, Naval Hosp. Training School, San Francisco.

C. B. Benham, U. S. N. Hosp., Portsmouth, N. H.

Wm. E. Moore, Great Lakes, Ill.

Edward Risley, U. S. N. Hosp., Great Lakes, Ill.

Clarence Knappenberger, Ph. C. '13, U. S. A. Hosp. Corps, Ft. Logan, Col.

Theodore N. Cottrell, Ph. C. '13, 30th Engineers, Gas and Flame Service, Camp American University, Washington, D. C.

UNIVERSITY OF ILLINOIS

Among the senior students who have enlisted and have left to join the Army are: Birger Lindh, Ralph Parkhurst, Burt Ward, Homer Wherley, Cyrenus Sickman and Louis Karel. Of the junior students, William R. Paara has joined the Navy, Cosmo D. Biaselli and Charles G. Clapp are in the Army.

Dr. F. E. Shipman, '08, is lieutenant in the Medical Corps and has just been ordered to Ft. Macon, So. Carolina, for instruction. Dr. Jacob Goodman, '07, is also a lieutenant in the Medical Corps and has been ordered to Ft. Upton, New York, for instruction.

Among recent enlistments in the Army are: Stewart Strain, '15, Arthur Bakkers, '17, Guy Davis, '15 and Bayard E. Simmons, '15. Oscar L. Lundgren, '17, is sergeant in the Medical Corps and is stationed at Ft. Des Moines, Iowa. In the same detachment is J. F. Corleto, '14. R. J. Prendergast, '14, is a member of the National Army at Houston, Texas.

UNIVERSITY OF MICHIGAN

A. E. Anderson, U. S. R.

Bernard Bosman, Coast Artillery.

B. L. Broadwell, U. S. R.

E. J. Foster, Naval Reserves, Great Lakes.

T. J. O'Marra, Ambulance Corps, Camp Syracuse.

Manley I. Shaw, Camp Custer.

J. H. Thorburn, Camp Custer.

J. H. Smith, Canadian Royal Flying Corps in France.

H. L. Van Gorden, Camp Custer.

W. H. Wistrand, Ambulance Corps in France.

S. P. Grandy, Medical Reserve Corps, Columbus, O.

J. L. Powers, Medical Reserve Corps, Columbus, O.

UNIVERSITY OF MINNESOTA

Manley H. Haynes, '11 and '13, furloughed to complete medical course.

Harry W. Christianson, '14, furloughed to complete medical course.

Frank L. Redfield, '16, Co. C., 125th Field Artillery, Camp Cody, N. Mex.

Joseph Vadheim, '15, Medical Department, Fort Snelling, Minn.

Peter Vadheim, '17, Medical Department, Camp Grant, Rockford, Ill.

James F. Mahoney, '16, Ambulance Co. No. 352, Camp Dodge, Iowa.

Harold E. Meyer, '14, commission of 2nd lieutenant, Reserve Officers' Training Camp.

Victor Noreen, '15, Camp Cody, Deming, N. Mex.

William F. Hoppe, '10, 339th Field Artillery, Medical Department, Camp Dodge, Iowa.

Carl A. Swanson, '14, 351st Infantry, Medical Department, Camp Dodge, Iowa.

Frank L. DeMars, '16, Base Hospital, Camp Kearney, Linda Vista, Cal.

Howard E. Eichinger, '17, 151st Field Artillery, 42nd Div., Medical Detachment, Camp Mills, Long Island, N. Y.

Karl E. Bleser, '17, Marines.

Leonard A. Berg, '17, Regimental Infirmary, 341st Infantry, Camp Grant, Rockford, Ill.

Raymond A. Vaaler, '17, Navy.

Romayne Taylor, '17, Marines.

William R. Laliberte, '11, National Naval Volunteers, Pharmacist on U. S. S. Kansas.

Norwood G. Landru, Camp Dodge, Iowa.

Abe L. Epstein, Medical Detachment, 337th Field Artillery, Camp Dodge, Iowa.

George E. Layne, Field Hospital 315, Section 12, Camp Funston, Kansas, (Sergeant).

Benamin Berkuvitz, Sergeant, Post Hospital, Fort Sheridan, Chicago.

Henry Hawlish, U. S. Coast Guard.

Charles P. Winzenburg, 15th Ambulance Company, U. S. Hospital Corps.

Harvey M. Kinch, Aviation Section, Camp Kelly, San Antonio, Texas.

Royce C. Martin, U. S. Marine Corps.

Fred J. Sackett, enlisted in Hospital Corps, U. S. Navy.

Francis A. Tuttle, U. S. Marine Corps.

Murray Woulfe, 136th Infantry, Camp Cody, New Mexico.

Chas. L. Caron, sergeant, Medical Department, 136th Infantry, Camp Cody, New Mexico.

Willis I. Heiberg, 351st Infantry, Camp Dodge, Iowa.

Gotthard J. Sahol, hospital apprentice, U. S. Navy, Great Lakes Station.

N. P. S. A. ELECTS 345 MEMBERS

Three hundred and forty-five new members were added to the roll of the National Pharmaceutical Service Association at the meeting held at the Philadelphia College of Pharmacy on Dec. 11.

Dr. Henry P. Hynson of Baltimore, who had been invited to speak on the organization of a Pharmaceutical Corps in the Army, stated that there were two ways open to pharmacists for securing such a corps. One was to induce the medical profession and the Surgeon-General's office to favor such a measure, and the other was to have a bill similar to the Edmonds Bill passed by Congress over the head of the Surgeon-General. Dr. Hynson told of his connection with the Rotary Clubs and of the cooperation that could be afforded the movement for the passage of the Edmonds Bill by Rotarian pharmacists. Dr. Hynson said that he would make it his first "order of business" to secure the cooperation of Rotary Clubs throughout the United States in behalf of the Edmonds Bill. He also mentioned the desirability of having the support of the National Drug Trade Conference in pushing this measure through Congress.

Caswell A. Mayo of New York, who had also been invited to speak on the Edmonds Bill, made a very interesting address based on his experiences in the various camps which he has had an opportunity to visit. He declared that it was absolutely necessary for the welfare of our Army to have adequate pharmaceutical service and urged that subscriptions be asked for so as to swell the funds of the N. P. S. A. sufficiently to be able to carry on an active propaganda in behalf of the measure. The secretary was directed to send out letters asking for contributions for this work and the Executive Committee was instructed to prepare literature telling of the work of the N. P. S. A. It was also decided to ask the National Drug Trade Conference and other associations for their active cooperation in this work.

—H. M FAGAN, for forty-three years a druggist at Shelby, Iowa, has sold his store to Schulte & Heise of Harlan. Mr. Fagan has been in ill health for some time and will spend the winter in California to recuperate.

—ROY L. HAYES, formerly with the Atkinson Drug Co., Madison, Ga., has joined the hospital branch of the service, and is now stationed at the United States Naval Training Station at Norfolk, Va.

PHARMACY STUDENTS ASK FOR TIME TO FINISH COURSES BEFORE DRAFTED

New York Conference from Three Large Pharmacy Schools Place Case Squarely Before Provost Marshal Crowder.

The Conference of Pharmacy Students of Greater New York, representing the student bodies of the several institutions teaching pharmacy in the Metropolitan territory, recently adopted and ordered the following communication sent to Gen. E. H. Crowder, provost marshal general of the United States Army at Washington, D. C. The officers of the Conference of Pharmacy Students are: Chairman, Max Wolfson, Columbia University; treasurer, Albert D. Fairland, Fordham University; secretary, M. Jess Lifschitz. The communication referred to is as follows:

Brooklyn, N. Y., December 1, 1917.

General E. H. Crowder,
Provost Marshal General,
Washington, D. C.

Dear Sir:

A meeting of the Conference of Pharmacy Students of Greater New York, an organization representing the student body of the Brooklyn College of Pharmacy, Fordham University College of Pharmacy and Columbia University College of Pharmacy was held November 28, 1917.

The subject of the pharmacy student in his relation to the present selective draft was carefully considered. with the result that it was decided to lay the case of the Senior Pharmacy Student before you, requesting you to assist him in his earnest desire to be of the greatest possible service to his country and at the same time carry out his object of becoming an educated, licensed pharmacist.

It is fifteen months since we began our study and will require but six more months of study to make us eligible for graduation with the degree of Graduate in Pharmacy and to become licensed pharmacists with all the rights and responsibilities that go with such license. We have completed a full Junior course at College and are now well established in the work of our Senior and final course.

We have no desire to evade our duty as citizens and will gladly respond to our country's call and devote the best there is in us to its service. We believe, however, that our services will be much more valuable after the completion of our College course and know the interruption of the same will result in hardship and in many cases irreparable loss.

In considering our position and request kindly have in mind that to relinquish a partially completed course of study is a much more serious matter for a pharmacy student than for the student of many other professions or trades. College graduation is a prerequisite for admission to the examinations upon which the license to practice pharmacy in our State depends. An interrupted college course will lessen our chances of successfully passing such examinations.

If our service in the Army or Navy extends over several months or years, our chances of ever carrying out the objects for which we have worked hard and earnestly, that of becoming college graduates and licensed pharmacists will be very small. If, however, we are permitted to carry out our full intent and desire, we will, at the expiration of our College course, enter any service of our country to which we are called with an unequalled spirit of thankfulness, enthusiasm and loyalty. Furthermore, at the close of the war, we will be in a position to practice our chosen profession.

We therefore, earnestly and respectfully request you to use the authority vested in you, to grant an extension of time to those of us who may be called into service before the completion of our College course, or else, that we be placed in such unit or corps as will make it possible for us to be transferred to our College work until the same is completed.

Obediently and hopefully yours,
CONFERENCE OF PHARMACY STUDENTS
OF GREATER NEW YORK.
Per M. Jess Lifschitz, Sect'y.

Alcohol Under New Revenue Regulations

Synopsis of official requirements governing purchase and sale of alcohol by pharmacists. In their application for permits, druggists must state probable quantity that will remain outstanding against their bonds undisposed of. Non-medicated alcohol not to be sold to physicians or hospitals unless these have filed a bond and hold a permit from the Internal Revenue authorities. Type of blank form recommended for use in applying for permit. Druggist has choice of ten formulas authorized by Government for medicating alcohol.

DRUGGISTS in some localities have been considerably confused in their attempt to arrive at a full understanding of the regulations issued by the Department of Internal Revenue regarding the sale of alcohol in pharmacies. As the regulations are studied, however, the situation becomes clearer, the principal points for the druggist to remember being recapitulated below.

The Food Control Act of August 10, 1917, and the regulations for its enforcement apply only to distilled spirits fermented on and after Sept. 8, 1917, so that spirits made before that date may be used and sold without regard to the new law and regulations. This gives the retail druggist who possesses a special tax stamp as a retail liquor dealer the right to use and sell alcohol, that is, alcohol fermented before Sept. 8, not medicated, either for beverage or non-beverage purposes, providing, of course, that such sales are not prohibited by local statute or ordinances.

Under the Food Control Act and regulation No. 2576, all alcohol made on or after Sept. 8, to be sold by pharmacists, must be medicated in accordance with certain formulas prescribed in T. D. No. 2576, the quantity of alcohol when so medicated that may be sold to any one individual being restricted to not more than one pint. Such alcohol must be medicated by the druggist at the time the order is received, and not in advance of the order. Alcohol so medicated must not be confused with denatured alcohol, which legally can be only manufactured in central distilling establishments and bonded warehouses in the manner prescribed by the Internal Revenue regulations.

All persons purchasing non-beverage alcohol for use in manufacturing processes must obtain permits from the collector of internal revenue of their particular district and file a bond equal to three times the difference between the tax on beverage and non-beverage alcohol, which is $3 per proof gallon. Under T. D. 2559, distilled spirits for other than beverage purposes may be used only in the arts, sciences, and trades where the circumstances are such that there can be no probability that the spirits will be sold or used for beverage purposes or in the manufacture or production of any article intended for use as a beverage. The use for other than beverage purposes would include the manufacture of bona fide United States Pharmacopoeia or National Formulary medicinal, culinary, and flavoring extracts, as well as cosmetics and toilet preparations, including bay rum, perfumery, toilet waters, extract of witch hazel and listerine, and would include proprietary medicines for which special tax is not required as rectifier from the producer, or special tax as wholesale or retail liquor dealer from the vendor.

The principle laid down in the regulations is that all sales are presumably for beverage purposes when made to a retail dealer in alcoholic beverages, and permits will be withheld from such dealers. Pharmacists who are holders of special tax stamps as dealers will be entitled to use or sell alcohol for other than beverage purposes, but they will be required to obtain permit, give bond, and make application as prescribed in the regulations. Pharmacists who are qualified as retail liquor dealers may procure non-beverage spirits on the same terms, but they can lawfully sell the same only when medicated by one of the ten formulas prescribed in T. D. 2576. The same rulings apply to physicians. Druggists may not sell to physicians, hospitals or sanatoriums non-medicated alcohol unless the physician, hospital or sanatorium has filed the required bond and obtained a permit. Druggists are not prohibited from using alcohol for compounding prescriptions of physicians which are for internal use, providing the resulting compound is so medicated as to be unfit for use as a beverage. To be able to purchase non-beverage alcohol physicians must, in addition to having filed the required bond and obtained the permit, order such alcohol on a form prescribed by the law.

The following form of application for permit required under the food control regulations has been prepared by the Philadelphia Retail Druggists' Association and recommended for use by its members, as the statement is made that the department does not furnish blanks, and that every druggist applying for a permit must prepare his own form:

Application for Permit to Use or Sell Distilled Spirits for Other Than Beverage Purposes, with Collector's Approval Thereof.

U. S. Internal Revenue
Form..................................
Serial number of Permit.................
...................................19....
To......................................
Collector.............................District of.........

The undersigned, having filed appropriate bond, hereby makes application to manufacture or sell, or manufacture and sell, tinctures, extracts (or other products, specifying by classes), in conformity with the standards laid down in the United States Pharmacopoeia or National Formulary.

The undersigned further intends to manufacture and sell the following alcoholic medicinal compounds not in conformity with the United States Pharmacopoeia or National Formulary:

Name of Manufacturer. Name of Product.
Manufacturers' name if manufactured for him.
Percentage Alcohol by volume in product.

The undersigned solemnly swears that the alcoholic medicinal compounds intended to be manufactured, as heretofore named, do not contain any more alcohol than is necessary for the purposes of solution or preservation, that they contain in each fluid ounce a dose as a whole or in compatible combination of one or more agents of recognized therapeutic value, that they contain no agents, either chemically or physiologically incompatible with the active medicinal agents upon which the medicinal claims are based, and that they are not beverages and are not to be sold or used as beverages.

The probable quantity that will remain outstanding as a charge against the applicant's bond undisposed of, in transit, in process of manufacture, or in storage, will be................................ proof gallons.

(Signed) ....
Approved: .... Collector......Dist. of.... Dated...............19...

The foregoing application must be made in duplicate. After approval, one copy shall be retained by the local collector and the other delivered to the applicant, who will place it conspicuously in his place of business.

Pharmacists who hold permits to sell "medicated" alcohol must use one of the following formulas:

1. Carbolic acid 1 part, alcohol 99 parts.
2. Formaldehyde 1 part, alcohol 250 parts.
3. Bichloride of mercury 1 part, alcohol 2,000 parts.
4. Bichloride of mercury 0 8 gram, hydrochloric acid 60 c.c., alcohol 640 s.c.c., water 300 c.c.
5. Bichloride of mercury 1½ grains, hydrochloric acid 2 drams, alcohol 4 ounces.
6. Formaldehyde 2 parts, glycerin 2 parts, alcohol 96 parts.
7. Carbolic acid 1 dram, tannic acid 1 dram, alcohol 1 pint, water 1 pint.
8. Alum ½ ounce, formaldehyde 2 drams, camphor 1 ounce, alcohol and water, each 1 pint.
9. Lysol 1 part, alcohol 99 parts.
10. Liquor cresolis, comp. 10 c c., alcohol 1,000 c.c.

The container of such alcohol will bear a "poison" label.

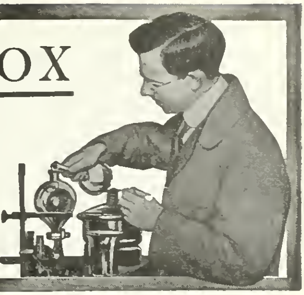
Any abuse of these privileges will result in recall of the pharmacist's permit and its cancellation.

THE QUESTION BOX

The "How to Do It" Department

CONDUCTED BY PHARMACEUTICAL EXPERTS

For the benefit of ERA Subscribers



Repairing Mercury Backed Mirrors

(F. E. P.)—Try one of the following methods:

(1)

Clean the bare portion of the glass by rubbing it gently with fine cotton, taking care to remove any trace of dust or grease. If this cleaning be not done carefully, defects will appear around the place repaired. With the point of a knife cut upon the back of another looking-glass around a portion of the silvering of the required form, but a little larger. Upon it place a small drop of mercury; a drop of the size of a pin's head will be sufficient for a surface equal to the size of the head of a nail. The mercury spreads immediately, penetrates the amalgam to where it was cut off with the knife, when the required piece may be lifted to the place to be repaired. This is the most difficult part of the operation. Then press lightly the new portion with a piece of cotton; the amalgam hardens almost immediately and the glass presents the appearance of a new mirror.

(2)

Pour upon a sheet of tinfoil about 3 drams of quicksilver to the square foot of foil. Rub smartly with a piece of buckskin until the foil becomes brilliant. Lay the glass upon a flat table, face downward; place the foil upon the damaged portion of the glass; lay a piece of paper over the foil and press it down with a block of wood or a piece of marble with a perfectly flat surface, using a weight of sufficient size to press it down tight, allowing the weight to remain in this position for a few hours. The foil will adhere to the glass. As mirrors are made by backing the glass with a film of silver or with an amalgam of mercury, the "resilvering" process employed must be selected accordingly. Formulas for using silver nitrate in repairing mirrors appeared in the Era of February, 1914, page 59.

Density of Sugar Syrups

(H. B. C.)—We know of no tables constructed on just the lines you seem to indicate, although there are tables given in various chemist's handbooks which show the strength of sugar solutions by degrees on Beaumé's hydrometer, which degrees are easily convertible into specific gravity figures. Thus, a solution of sugar showing a density of 1 degree Beaumé would contain 1.72 per cent. of sugar; a solution measuring 10 degrees Beaumé would contain 18.04 per cent. of sugar, and so on. Some of the more important factors shown in this table are the following:

Be. deg.	Sugar %	Be. deg.	Sugar %
1	1.72	25	45.79
5	8.90	30	55.56
10	18.04	35	65.19
15	27.25	40	75.35
20	36.40		

By taking the density with the Beaumé hydrometer of any measured volume of solution of sugar you can easily tell by means of the percentages given in the table how much sugar the solution will contain. A table compiled a good many years ago by Dr. Ure shows the quantity of sugar in equivalents of av. pounds for a gallon of syrup of specific gravities ranging from 1.148 to 1.300. As given in Ure's table, a gallon of syrup having a specific gravity of 1.143 contains 3.9235 av. pounds of sugar; a syrup of 1.300 specific gravity contains 8.1001 av. pounds of sugar, and so on. By means of the tables in the Era Dose Book you can easily ascertain the various specific gravities corresponding to Beaumé degrees.

A fact which must be borne in mind in the preparation of syrups is that large quantities of sugar dissolved in water very materially increase the bulk of the liquid. Sugar is soluble in half its weight of water at 15° C. (59° F.), and a saturated solution of sugar would have a specific gravity of 1.345, and be considerably denser than the official syrup which has a specific gravity of about 1.313, corresponding to about 34 degrees Beaumé when measured on that hydrometer. The U. S. P. syrup contains about 64.74 per cent. by weight of sugar, a pound of the syrup thus made measuring very close to 12 fluid ounces. From the figures of solubility given in the foregoing you can readily understand that it is impossible to dissolve 25 pounds of sugar in a gallon of water at normal temperature. Theoretically, it would require somewhat more than 13½ pounds of water to dissolve this quantity of sugar on the basis of producing a syrup of U. S. P. density.

Acriflavine and Proflavine

(Dr. O. C. K.)—A very thorough canvas of the leading importers and jobbing druggists of this city reveals that none of them have either of these compounds in stock, and they say they know of none that is being used in this country at the present time. Apparently the medical use of both of these products is still in the experimental stage, both substances having been recently brought forward by the medical research authorities of Great Britain for use in the treatment of wounds. Various preliminary reports on their clinical application have been printed in such journals as the *British Medical Journal* and the *London Lancet*, abstracts of which have appeared in the medical journals of this country. So far as we can ascertain, neither of the products has been put on the market here.

Proflavine is 3.6-diamino-acridine sulphate, while acriflavine (formerly called flavine) is 3. 6-diamino-10-methyl acridinium. Proflavine represents an earlier stage in the production of acriflavine, hence it is stated, it should be cheaper to use. The solubility of proflavine is similar to that of acriflavine in normal and hypertonic sodium chloride solution, and along with 0.5 per cent. sodium citrate; the addition of alkali to the neutral solution must be avoided, however, in the case of proflavine, as this causes precipitation. Clinical observations indicate that proflavine has hæmostatic action.

A note in the London *Chemist and Druggist* of Sept. 8, states that as soon as adequate quantities of the acriflavine dye are available, more extended trials are to be carried out under the British Medical Research Committee. As a basis for the dressing of wounds with acriflavine various pastes have been proposed, as sodium stearate soap, gelatin or starch mucilage, an addition of 0.1 per cent. of acriflavine being incorporated with the vehicle selected. It is said that the soap form is most used at the present, being made by neutralizing 1¾ parts of stearic acid with 1 part of sodium carbonate then adding 0.1 per cent. of acriflavine. The soapy compound is of a canary yellow and firm in consistence. The wounds are packed with acriflavine paste after preliminary surgical sterilization and drainage.

Taxability of Medicinal Substances

(G. S. M.)—The answer to your inquiry relating to taxes imposed upon certain medicines under the War Revenue Act of Oct. 3, is given by the Commissioner of Internal Revenue as follows:

"The taxability of a medicinal substance or preparation is determined by the manner in which it is prepared or the way in which it is put upon the market. Medicinal preparations for beasts, when the same would be taxable if used by man, are taxable. Arona, cough drops, National corn remover, and Criswell's jimpson-weed plaster are taxable. Samples of patent medicines, etc., distributed gratis from house to house, articles and preparations commonly known as stock foods, 20-mule-team borax, avenarious carbolineum, mixed feeds, chicken feeds, etc., not recommended or held out as remedies or specifics for affections or diseases but as feed only, Thompson's malted milk or malted beef peptone, Horlick's malted milk, and other food preparations, whether for man or beast, unless held out or recommended as remedies or specifics for diseases of the human or animal body, insecticides, as such, are not taxable.

"Where the owner of a formula contracts with a manufacturer to manufacture a certain amount of his product. and to bottle, label, carton and prepare same for shipment and delivery to owner of formula, the labels containing formula owner's name and address only, the formula owner is the manufacturer of the goods and will have to pay the tax. If, under the circumstances, the formula owner sells a part of this preparation at retail, he must render return for sales tax upon price for which goods are sold. A retailer dealer, manufacturing a patent medicine by a private formula, is subject to the 'producer's' tax, even though he sells such a product only in his retail store."

Melting Sulphur by Superheated Steam

(W. P. D.)—"I am enclosing an article clipped from a New York paper and ask if the information it gives is correct? Having been taught these many years past that sulphur is obtained from volcanic deposits or in volcanic districts (the U. S. D. mentions the fact), how can it be found in quantity on the Texan and Louisiana coasts? I do not understand that the alluvial and marsh lands of these states are of volcanic origin? The article also contains a statement that 'superheated steam will melt sulphur?' The U. S. P. states that the melting point of sulphur is 115° C. Is superheated steam of this temperature? I hope you can find room in your valuable journal to answer this inquiry for me, although it may be possible I should have learned the facts a half century ago."

The clipping sent in by W. P. D. is a newspaper story on the production of sulphur in the United States, most of the facts set forth therein being taken or "rewritten" from a publication recently issued by the United States National Museum under the title "Sulphur; an Example of Industrial Independence." In the article, reference is made to the sulphur deposits in Louisiana and Texas, and the manner in which the product is mined, some of the facts outlined, in the opinion of our correspondent, being beyond the bounds of probability. But we find nothing in the entire article that is not in keeping with the facts. Sulphur was produced in 1915 in Louisiana, Texas, Nevada and Wyoming, according to the "Mineral Resources of the U. S.," more than 98 per cent. coming from the two States first named. Our correspondent makes reference to obtaining sulphur from volcanic deposits, etc., but this statement is not antagonistic to the supposition that the sulphur found in Louisiana or Texas might be of similar origin. It is possible that the greater part of the Gulf of Mexico is in the area of volcanic disturbance, as the great tidal waves that have visited the Texan coast would tend to show. The main fact, however, is that sulphur is found in deposits beneath the Louisiana and Texas areas too deep to be mined in the usual manner, but is obtained by the Frasch process by sinking a shaft or well about 12 inches in diameter, just as in the case of boring for oil or salt, until the sulphur is reached. The well is lined with an iron pipe in which are three other concentric tubes lined with aluminum which are driven into the sulphur. Through the largest of the tubes superheated water under a pressure of 100 pounds is introduced, the heated water melting the sulphur and causing it to rise in the outer tube. The sulphur, however, being heavy, will not flow to the surface, so hot air under pressure is caused to bubble through the sulphur, the air emulsifying the sulphur and permitting it to be pumped to the surface.

The use of steam under pressure for transmitting heat is a wellknown operation, and "superheated steam will melt sulphur." It has been stated that steam produced in open and unconfined vessels, with the ordinary pressure of the atmosphere, has the temperature of 100° C. If water is heated continuously in a boiler capable of withstanding pressure, the water is prevented from boiling by the pressure of its own vapor, and the temperature of the steam rises in proportion as the pressure increases. Thus, tables are given in many engineers' handbooks showing the temperatures of superheated steam. At atmospheric pressure steam has a temperature of 100° C.; at 25 pounds pressure, a temperature of 115.6° C.; at 50 pounds pressure, 138.50° C.; at 75 pounds pressure, 153° C., and at 100 pounds pressure to the square inch, the temperature of the steam may be made to reach 164.4° C. A full discussion of the general principles relating to temperature may be found in almost any textbook on physics. Of course, the opposite effect is produced when the pressure is removed, the use of vacuum apparatus making it possible to boil water below the temperature of 100° C.

Liquid Face Powder

(T. F. Co.)—The title "liquid face powder" has been applied to any suitable powder held in suspension in a liquid medium and thus used in making up the toilet. Here are several formulas:

(1)

Zinc oxide, 2 ounces; glycerin, 1½ ounces; water, 1½ ounces; tincture of balsam of peru, 2 minims; tincture of storax, 2 minims.

(2)

Bismuth oxychloride, 6 drams; glycerin, ½ fl. ounce; alcohol, ½ fl. ounce; essence of cassia, 15 minims; essence of violet, 5 minims; essence of tuberose, 15 minims; water, 2 fl. ounces.

A preparation which contains a powder in solution and sometimes used, is the following: Magnesium sulphate, 60 grains; rose water, 12 ounces; orange flower water, 4 ounces. Or this one: Sodium borate, 1 dram; boracic acid, 20 grains; any perfumed toilet water, 1 pint.

In this connection, it can be said that almost any ordinary face powder may be converted into a lotion by mixing it with water, which may or may not be colored; a small amount of glycerin is frequently added, the powder being suspended in the liquid on shaking. In making these preparations, a perfectly smooth mixture must be first formed by trituration, preferably rubbing the powder first with the glycerin. If a white preparation is desired, no coloring agent is employed; but if a flesh-colored preparation is wanted, then a solution of carmine or an alcoholic solution of eosine must be added A little experimenting should enable you to turn out a satisfactory preparation.

Formulas for Cosmetics

(T. F. Co.)—Various preparations are sold under the title of "liquid rouge," one of the most common being a solution of carmine made as follows:

Pure carmine	4 drams
Solution of potassa	6 drams

Mix and add—

Essence of white rose	3 ounces
Water, enough to make	20 ounces

Set aside for a few days, agitate occasionally, and filter.

A similar formula in which the carmine is dissolved by means of ammonia is the following:

Carmine	2 drams
Ammonia water	sufficient

Dissolve the carmine in just enough of the ammonia water then add—

Rose water to make	16 ounces

Set aside for a few days and decant or filter.

Lip Sticks

Paraffin	4 ounces
Paraffin oil	4 ounces
Oil of bergamot	25 drops
Oil of lemon	25 drops

Color with 10 grains of alkannin (or use alkanet root and strain). When melted pour the mass into thick glass tubing of the desired diameter and push out with a stick when cold.

A somewhat similar formula is the following from the Era Formulary under the title—

Coral Sticks

Paraffin	6 drams
Cacao butter	6 drams
White vaseline	2 ounces
Carmine	10 grains
Otto of rose	5 grains

Melt the paraffin, cacao butter and vaseline; dissolve the carmine in a few drops of ammonia water, add to the vaseline mixture, stir, and when nearly cold, add the otto of rose.

Eye Brow Pencil

Suet	½ pound
Curd soap	¼ pound
Ivory black	q. s.

Mix and put in a metal case or roll into pencils.

Non-Freezing Solutions for Automobiles

(T. F. Co.)—Freezing of the cooling water of automobile engines is usually prevented by the addition of calcium chloride, glycerin or alcohol (wood or denatured), each of which is effective, but there is a well-founded preference for the last named, because alcohol will not damage the water connections, while the use of calcium chloride, glycerin and some other substances, tends to injure the entire radiating system. As given by automobile authorities, mixtures of one-quarter alcohol and three-quarters water will withstand freezing at 0 degrees F.; mixtures of 3½ parts of alcohol and 6½ parts water freeze at —15 degrees F., and of 4 parts alcohol and 6 parts water freeze at —25 degrees F.

The Editor's Correspondence

REASONS FOR A PHARMACEUTICAL CORPS

Editor The Pharmaceutical Era:

Having read several able articles in behalf of the proposed Pharmaceutical Corps, will you kindly permit a former pharmacist, though still a pharmacist in spirit, to explain himself on this most vital subject? Being now engaged in the practice of veterinary medicine I believe that I am in a position to view the situation fairly and to express myself without bias.

The properly educated pharmacist, and I have none other in mind, is perfectly at home in the pharmaceutical, chemical, and biological laboratories. He scientifically blends noxious drugs and chemicals into pleasing and palatable preparations. Anything submitted to him for analysis in the way of blood, sputum, urine or mixtures of unknown origin he handles with efficiency. As a prescriptionist he is the doctor's safeguard in that he checks faulty prescriptions, such as are incompatible, or which contain an overdose of some toxic agent; during my eight years behind the prescription case I found or rather checked off quite a number. I do not state this with the object of derogatory criticism, because the best of medical practitioners, due to overwork and lack of sleep, are very apt to make mistakes. The pharmacist's training is on a parity in every particular with that of the allied professions; his services are as essential as those of any other branch of the medical service, why then should he not be accorded due recognition in the army or navy?

In order to do efficient work in any branch of the medical department it is essential that each branch have its own affairs strictly in charge and when any part of the service is hampered by a section that is ignorant of its needs, that particular branch naturally suffers. Such is the condition of the pharmacist in the army and navy today. Not as a pharmacist but as a veterinarian I urge that something be done. Congress should act at once and act promptly, but to do this some one must show Congress the way, and only you, "Mr. Pharmacist," can tell the shoemaker where your shoe pinches.

Walter D. Jensen, D. V. M.

Taylor, Neb., Dec. 4, 1917.

OPEN LETTER TO WISCONSIN DRUGGISTS

Milwaukee, Wis., Dec. 12, 1917.

As a fellow druggist I would ask you to consider this letter carefully.

The receipt of a pamphlet by Senator LaFollette entitled "Free Speech" has set me thinking. This speech was printed and mailed at the expense of the United States Government. No one in this country is denied the right of free speech, but such utterances at this time by men like LaFollette and others of his stamp, are productive of much harm. It is up to us as good Americans to do what we can to counteract such talk. It occurred to me that we, as druggists, come in contact with many people. I am sorry to say that there are many good citizens who are lukewarm and do not seem fully awake to the gravity of the situation. We need their aid. Let us do what lies in our power to impress upon them the fact that we are engaged in THE GREATEST WAR OF ALL TIME. We have enemies in our midst.

Our boys are fighting for us at the front. Let us do our duty at home. WE ARE AT WAR. WE CANNOT LOSE. WE MUST WIN. OUR FORM OF GOVERNMENT IS AGAIN ON TRIAL. THIS IS NO TIME TO HESITATE OR TALK PEACE. Let us put our shoulders to the wheel and do our duty. Let us do this work with all our hearts, with all our minds, and with all our strength, knowing that the harder we work the sooner we shall see the end of this terrible struggle.

Robert M. Dadd

Women in Pharmacy

CONDUCTED BY EMMA GARY WALLACE

Women in Pharmacy Today

By R. A. KUEVER,

College of Pharmacy, University of Iowa

DURING the past three years European countries have witnessed the advent of women in fields hitherto controlled entirely by men. Inspired by patriotism, women offered their services in offices and factories where their help, at first a grateful addition, soon became a real necessity. With the duration of the war came multiplication of their tasks, until woman's sphere included the most menial labor in mines and ammunition plants. They have borne their added responsibilities bravely and capably, sacrificing equally with the men folk in order to do their bit.

America will witness the same spectacle—is witnessing it now in a small way. With us, however, it is different, in that our women are afforded time to fit themselves for the work. The delay in placing our fighting forces in the field, has enabled the majority of our men to continue their business undisturbed, or to substitute other men in their places. Women have shown an ardent desire to serve, and in many places girls are being employed to run elevators, page lobbies and perform similar tasks. But by far the greater number are serving by conserving and knitting nor would I under-value that service—but it must be materially increased and broadened as our man power decreases.

How can I best serve? is the question confronting thousands of American women who are looking into the future welfare of our country. There is no field which offers greater opportunities than pharmacy. The demand for skilled pharmacists has never been so great, the salaries have never been so large, and the number of available pharmacists never has been so small as it is at present—three very good reasons why more women should enter that field. Not only that; it is work for which women are admirably fitted. It does not require hard manual labor; it is clean pleasant work, which any scientifically trained woman can do admirably and enjoy doing. Calls for registered pharmacists are constantly being received which cannot be filled because so many of the young men in that profession have entered some branch of our national service, and many more will be called to the colors this winter.

Our professional colleges feel the loss of the young men who have responded so promptly to their country's call, but their places are bound to be filled by women who realize in this their opportunity for service. The percentage of women in professional training is decidedly on the increase. At the State University of Iowa this year, seventeen per cent. of those registered in the College of Pharmacy are women. Another year it will be even greater, for women are quick to avail themselves of the double opportunity to earn their livelihood and do their bit.

Around the Circuit

The November meeting of Philadelphia Chapter, No. 6, held at the College of Pharmacy, was enthusiastic and matters touching the profession of pharmacy received earnest attention. The Red Cross Auxiliary of the Chapter reported that twelve comfort bags had been filled and sent to the Red Cross Society. The Auxiliary meets every Wednesday at the home of Mrs. Lee. Mr. Beringer was present and spoke about the Edmonds Bill, No. 5531, which provides that pharmacists entering the army and navy should have rank and professional recognition. The Philadelphia women pledged their support to the furtherance of the objects of the bill. The December meeting was replaced by a Christmas Party held December 28, in the College Museum, to which each member had been invited to bring one or more friends, their own children, and if they had none, a little child who would enjoy the gathering. The guests of the day were the College Settlement children.

The president, Mrs. Mary R. Green, of Newton Highlands, presided at the recent meeting of the Women's Organization of the Boston Association of Retail Druggists at the Women's City Club, Boston, the occasion being the annual President's Day. The entertainment took the form of a musical. The soloist was Mrs. Bernice Leavitt, Mrs. Mildred Brent Morse rendered selections on the violin, and the work of the Chapter was thus favorably brought to the attention of other sister clubs. Refreshments were served and a social hour followed. At the meeting of the Chapter, held on Dec. 29th, "Christmas Stories" was the topic for the afternoon.

Instead of its regular meeting the Milwaukee Chapter No. 19, recently held a card party at the Blatz Hotel, Each member invited a few friends. The Committee in charge consisted of Mrs. Loppnow, Mrs. Possehl, Mrs. Koerner, Mrs. Reineck and Mrs. Kuhnmuench. The proceeds were divided and distributed toward several charitable funds. Milwaukee Chapter's greetings to all members of the W. O. N. A. R. D. were thus expressed: "Yuletide Greetings: For the Past, Happy Memories; For the Present, Good Wishes; For the Future, Every Blessing."

At the recent meeting of the Louisville Chapter, held at the Y. W. C. A. Club Room, Mrs. Samuel Castleman gave a masterly talk on "Woman's Vote a Community Asset." Mrs. Henry Cohn, Chairman of the Red Cross unit, outlined plans for the winter. A contribution was made for the Belgian Relief Fund, the request coming through Miss Rebecca Averill of Lexington, Ky., who is the daughter of the oldest druggist in the state of Kentucky.

On Nov. 13, Chicago Chapter No. 2, celebrated "Vice-President's Day," the meeting being held at the Hotel La Salle and conducted by Mrs. J. Chwatal. Mrs. Samuel C. Henry was guest of honor. Judge John Stelk of the Court of Domestic Relations was present and appealed to the women to pledge themselves to help one family to a more harmonious way of living. On Dec. 13, the Chapter gave a very delightful Theatre Party.

St. Louis Chapter No. 8, are working busily for the Red Cross. The Annual Luncheon held in November was used as an occasion to raise money for charity work.

Youngstown Chapter No. 14 is busy with patriotic work under the leadership of Mrs. F. E. McBride.

Indianapolis Chapter No. 20 is outfitting the motherless soldier boys from Indianapolis who have no one to look after their interests.

Substitutes for Sugar and Glycerin

A. Ph. A. Branches Discuss War Emergency Measures, Legislation and Business

Prof. Curt P. Wimmer, of the New York College of Pharmacy, was the principal speaker at the December meeting of the New York branch of the A. Ph. A., presenting for the consideration of the members present a most timely paper on "Emergency Substitutes for Sugar, Syrup and Glycerin." At the outset, Prof. Wimmer stated that he hoped no one would get the impression from his paper that he advocated the illegitimate use of substitutes in any manner, shape or form. Neither would he appear as an alarmist proclaiming that sugar and glycerin would shortly disppear from the market, or that their use would be prohibited by the government. As he saw the situation, it was probable that a moderate supply would always be available for medical uses.

Without hesitation, he could say the quantities of sugar and glycerin used in compounding medicines are so large that their continued unrestricted use for this purpose might become embarrassing to food administrators. The General Council of Medical Education of England had already altered and amended the British Pharmacopoeia to save sugar and glycerin and had withdrawn seventy-three preparations, requesting that physicians cease prescribing deleted articles. Since that time the Council had published "War Emergency Formulas," providing for the manufacture of the preparations without sugar or glycerin, but without changing the physiological activity of the preparations. Prof. Wimmer then gave a list of the U. S. P. preparations in which sugar and glycerin were used, not for the purpose of recommending the deletion of some of the formulas for the period of the war, but mainly to show the extent to which these products were used in galenical pharmacy. The quantity of sugar used in this way, plus that used in numberless proprietary remedies give an idea of the total quantity used for medical purposes.

In discussing various substitutes, Prof. Wimmer said that none of them could reasonably be expected to equal in all respects the substances they are to replace, but if one can devise a substitute which will satisfactorily replace sugar in a given galenical, then the substitute must be called a success. The nature of the substitute will depend entirely in each case, upon the special property of the sugar or glycerin it is desired to impart. In England, he said, pharmacists must make application to the local food controller for a sugar supply for the coming year. Up to this time the food controller had allowed manufacturing pharmacists 50% of the total amount used by them in 1915.

Saccharin as a Sweetener

As a substitute for sugar or syrup to impart a sweet taste to preparations, nothing is more suitable than saccharin, discovered by Fahlberg in 1878, which is about 500 times sweeter than sugar. It is at least as cheap as sugar if it can be bought for about $40 per pound. The speaker said he did not believe that the use of saccharin should be permitted in any preparation which depends for its employment entirely or in part upon the presence of sugar, especially in a preparation used as a food. He believed that saccharin would come into its own through this war.

The property of lending consistency, and in more limited degrees, of preserving galenicals by the use of syrup, could be well imparted by glucose or similar substances, such as honey, manna or molasses, or mixtures of these. Acting upon the English suggestion to take glucose and dilute it with water to the specific gravity of sugar, 1.313, boiling, straining and adding to the solution some chloroform, he prepared such a solution, but found that the viscosity of the preparation was very much higher than that of the U. S. P. syrup. He then made a series of experiments with karo syrup and found that a mixture of 75% of this product with 25% (by volume) of water, at 25° C. had a viscosity practically the same as that of official syrup, while a series of taste experiments made to determine the concentration at which the sweet taste was first recognized distinctly, showed the following ratios:

Syrup, U. S. P., taste appears in dilution 1 : 110.
Glucose, 66 2/3% volume, taste appears in dilution 1: 25.
Karo, 75% volume, taste appears in dilution 1: 35.

Taking the sweetness of official syrup as one, it appeared that the glucose preparation was .227 and the karo preparation .32 as sweet.

Sweetness Not Always Calculated by Rule

Other experiments showed that sweetness cannot with safety be calculated by a rule of mixtures, and on making dilutions and testing them, it was found that 1.35 grams of sugar are required to every 1,000 mils to approximately impart the same degree of sweetness to the glucose syrup as the sucrose syrup possesses. Similar experiments made with karo syrup showed that 1.20 grams of saccharin are required for every 1,000 mils of 75% vol. syrup, the following formulas being evolved:

War Emergency Formula I

Liquid glucose	667.00	mils
Water	333.00	mils
Saccharin	1.35	grams

War Emergency Formula II

Karo, crystal white	750.0	mils
Water	250.0	mils
Saccharin	1.2	grams

The saccharin dissolves upon applying heat to the syrup.

While these syrups could be used in a number of medicinal preparations in place of syrup, some modification may be necessary to meet special cases. A glucose syrup cannot be used with any substance easily susceptible to reduction, and a glucose syrup is not as permanent as a sucrose syrup. The tendency of fermentation can be overcome, however, by the addition of a small amount of chloroform. On the other hand, a glucose syrup can be advantageously used in cases where a reducing syrup tends to retard decomposition, as in ferrous preparations or hypophosphites. The speaker verified his statements by exhibiting a number of galenicals made by use of glucose syrup. In compound licorice powder, a sample which he exhibited, the sugar had been replaced by a mixture of saccharin 1.50 parts to pure white dextrose 1,000 parts, which he found satisfactory. The possibilities of the use of invert sugar in galenicals should be investigated, and honey and manna should also be mentioned, the last named said to be especially serviceable for use with and in the preservation of iron preparations.

Difficult to Replace Glycerin

The disappearance of glycerin from pharmaceutical uses would be a calamity, as in many cases it cannot be readily replaced. In his discussion of this substance and its uses in pharmacy, Prof. Wimmer gave an outline of Dr. E. P.

Unna's views of the properties a good glycerin substitute should possess, summarizing the general considerations of the problem as follows:

"In preparations where physiological activity depends entirely upon the presence of the glycerin, substitution should not be attempted at all. Examples of such preparations are, glycerate of boroglycerin, glycerin suppositories and glycerophosphates. Physicians might be requested to refrain from prescribing them.

"In the case of preparations whose glycerin content is small or non-essential, the glycerin might be omitted entirely, or, its amount might be reduced to a minimum. Examples of such preparations are: Ointment of iodine, compound tincture of gentian, mucilage of tragacanth, and others."

To save the amount of glycerin used in hair tonics, face lotions and creams, the druggist was advised to make a good lotion or cream of his own and to recommend it whenever glycerin is wanted for the purpose. To show the character of such preparations, a number of formulas from a British pharmaceutical journal were given, some of them being accompanied by preparations made according to the different formulas. To replace glycerin in hair tonics, "turkey-red oil" or sodium sulfo-ricinoleate had been recommended. It is miscible with water. Formulas suggested by the London Pharmaceutical Committee for mixtures to replace glycerin in preparations where "body" is required were also presented.

In concluding his paper, Prof. Wimmer said that war emergency formulas were most important at this time, and he thought the subject was one worthy of official consideration by the A. Ph. A. Congress would surely not stand in the way, nor would State officers refuse to co-operate. The assistance the association could render to the Government and the profession in this work he thought would be very great, and in the national emergency pharmacists should be leaders for the country's good, not followers.

CHICAGO BRANCH

The 91st monthly meeting of the Chicago Branch of the A. Ph. A., held at the Kuntz-Remmler restaurant, was preceded by a dinner which was attended by about 50 members and guests. An exhibit of U. S. P. and N. F. galenicals for the A. M. A. convention to be held in Chicago next June was favored.

The first subject for discussion was the new pharmacy law in Illinois and its relation to the scarcity of clerks. William S. Denton, of the Illinois Board of Pharmacy Examiners, explained the workings of the new pharmacy law, especially the prerequisite features and the need for a greater number of assistant registered pharmacists. The prerequisite will not affect candidates for examination for some time to come. Apprentices should be encouraged to come up for the assistant registered examination just as fast as they can meet the requirements.

H. C. Christensen stated that more registered assistants was the solution of the clerk problem. He also said that statistics he was now gathering pointed to the fact that about 60% of the candidates now appearing before state boards for full registration were high school graduates.

T. H. Potts discussed the evolution in retail business brought on by war conditions and stated that he believed many of the financially weaker drug stores would not be able to weather these conditions, but he also believed this dropping out of the weaker stores would eventually greatly improve conditions in the retail drug trade and would help to solve the clerk trouble.

I. M. Light was optimistic over conditions in Chicago and stated that druggists generally were prosperous and were solving the clerk difficulty. Stores were kept open fewer hours daily, the wives of druggists and women clerks were frequently found assisting in stores and a general readjustment was being made. He stated that the demand for clerks was very much lessened and that the wages for clerks had reached their highest point.

W. B. Day discussed the requirement of three years' experience before the apprentice can take the assistant examination and held that in case the applicant had completed his college work during these three years, the full amount of time spent in the college should be allowed as experience. Under the present ruling of the state board only one college year is allowed in this experience time. If a young man enters the college immediately after his high school course, completes the college work in two years and then is required to put in two more years in a drug store as an apprentice, he has qualified for the full registered examination.

DETROIT BRANCH

The members of the Detroit Branch of the A. Ph. A. had the privilege of hearing two very competent men at the regular meeting, held on Dec. 14.

M. O. Williams, secretary of the Michigan Drug Co., gave a talk on "The Growing, Gathering, Marketing and Retail Selling of Sponges." With samples of the different grades and species of sponges, pictures of the warehouses and markets, and a first hand knowledge of the methods of gathering, the audience was given an insight into the sponge industry which is seldom accorded any one except buyers.

Since practically every human being is indebted to the rubber industry from the entrance into this world to the exit and all through life, all modern inventions from the telephone to the submarine having been made possible through the same medium, the topic of "The Manufacture and Selling of Rubber Goods," was of keen interest to all present. W. S. Davison sales manager of the drug sundry department of the Miller Rubber Co., Akron, Ohio, gave a graphic description of the manufacture of rubber goods, from the crude product to the surgeon's glove, and from his observation as a salesman, he showed the necessity for the druggist to merchandise and not merely storekeep.

NORTHWESTERN BRANCH

The Northwestern branch of the A. Ph. A., held its regular meeting at the college of pharmacy, University of Minnesota, on December 5, 100 members attending.

A feature of the meeting was an exhibit of twenty vegetable drugs produced in the medicinal plant garden of the university during 1917. Dr. E. L. Newcomb, of the college, was in charge of the exhibit, which included digitalis, the crop of which was the largest in the history of the garden. It now is held for the Council of National Defense.

The Edmonds bill, the purpose of which is to increase the efficiency of the medical department of the United States army, to provide a pharmaceutical corps in that department, and to improve the status and efficiency of the pharmacists in the army, was discussed by Dean F. J. Wulling.

W. G. Noyes of St. Paul, in a discussion of the war revenue law, touched upon the problems that continually are arising concerning the application and enforcement of this law, and gave interpretations of the various rulings of the Treasury Department.

"Methods of Examining Suspected Waters at the Front" was to be the subject of a paper by F. A. Upsher Smith of St. Paul, but Mr. Smith, a member of the Minnesota Home Guards, could not be present because of being on duty during the recent Twin Cities labor disturbances. In his place, Professor Charles H. Rogers, secretary of the Northwestern branch, read a paper on "The Chemical Examination of Resins of Datura Meteloides."

Schools and Colleges

PROF. SCHLICHTING, OF NORTH DAKOTA

Arthur F. Schlichting, who was given a full professorship in pharmacy and who has had charge of the pharmacy course in the department of chemistry of the North Dakota Agricultural College since July 1, 1916, is a representative of the younger men in the profession engaged in teaching. Prof. Schlichting's all round experience and training have peculiarly fitted him for his present position. He was born at Port Sanilac, Mich., in 1899, where he lived until the winter of 1906, when he accepted a position with Doty Bros., retail pharmacists of Detroit. In 1908, he entered the School of Pharmacy of Michigan University, graduating with the degree of Ph. C. in 1910, and passing the Michigan Board of Pharmacy as a registered pharmacist in the same year.

Prof. A. F. Schlichting

In the fall of 1910, he returned to the University as an assistant to Dr. A. B. Stevens, registering for the B. S. degree which he received in 1912, spending in the meantime three months in the laboratories of Parke, Davis & Co. He continued as a teaching assistant in pharmacy, enrolling as a candidate for the Master's degree. Before completing this course, however, he left the institution to become assistant professor of materia medica and assistant State chemist to the State of North Dakota, succeeding Prof. E. B. Putt, who resigned to enter the service of the U. S. Government. Upon the resignation of Prof. Ziefle in 1914, he was given the work of pharmacy with the title of assistant professor of pharmacy and assistant State chemist, becoming in 1916, as noted above, professor in pharmacy and assuming full charge of the pharmacy course, Dean E. F. Ladd being very much occupied with his additional duties as president of this institution. In the University of Michigan, Prof. Schlichting's major work was food and drug analysis, his minor subjects being mineralogy and organic and physical chemistry. Until he was relieved of State chemical work in 1916, he was extensively engaged in the analysis of "patent" machines.

Prof. Schlichting is a member of "The Aristolochite," the honorary pharmacy society, the "Phi Lambda Upsilon," the honorary chemical society, the A. Ph. A., and the North Dakota Ph. A. He was also recently appointed a member of the Committee on the Relations of Pharmacy Schools and Other Professional Schools of the American Conference of Pharmaceutical Faculties. He was married in 1913 to Miss Annabel McFawn of Detroit, Mich., and they have one daughter.

UNIVERSITY OF MINNESOTA

On account of war conditions, the College of Pharmacy began its regular work two weeks later this year than in former years. To make up partly for this delay the several vacations are being somewhat abridged. The Christmas holiday vacation, therefore, began on the morning of December 22nd and ends on the morning of January 2nd.

The student-body of the College assessed itself in sufficient amounts to purchase and present to the College a service flag 9 x 12 ft. in dimensions and bearing forty stars representing as many students and graduates who are in service. The flag was presented by Earl N. Greenberg, president of the upper class, who represented the entire student-body in the presentation. The flag was accepted by Dean Wulling in behalf of the College. Appropriate remarks followed by the faculty members, Professors Bachman, Newcomb and Rogers. The presentation of the flag was made the occasion for a college assembly, which was attended by the entire student-body. Because of the war the present enrollment is only about sixty per cent. of what it was last year and of the students now in attendance nearly one-third are drafted and are subject to call by the Government. While the flag bore only forty stars when it was presented, seven more have since been attached.

As a result of the meeting of the Deans of the technical schools of the University with the President of the University the latter sent a communication to the Secretary of War raising the question whether it is not possible to place technical students (including pharmacists) into the third classification, rather than leaving them in the first classification. This College and other University of Minnesota colleges offered their services to the Federal Government immediately after a state of war was declared and have just renewed that offer with the suggestion that, if the Government would establish some official relationship with the technical schools, it would go a long way to offset any public feeling of class distinction or class privilege that might arise. In suggesting the desirability of returning drafted students of technical colleges to their respective colleges for the completion of their courses, the College of Pharmacy did not place its request upon the idea of maintaining its enrollment, but upon a much higher and patriotic basis, well expressed in the following quotation from a letter by President Burton to the Secretary of War: "May I assure you, with all possible clearness and emphasis, that as a university we are not thinking of the number of students registered here nor have we any desire to conserve ourselves at the expense of the nation. I think I am speaking well within the truth and with considerable deliberation when I say that the University of Minnesota stands ready to give all that it has in co-operation with the Federal Government."

At about the same time President Burton received from Dr. Hollis Godfrey a telegram authorized by the Secretary of War, which reads as follows and explains itself:

"Have just been authorized by Secretary of War to request you to inform all your technical students that if they wait until drafted they can upon summons to the draft camp take with them letter from you stating their special qualifications, such letter to be filed with occupational census questionnaire of War Department under authority of this authorized telegram. Secretary of War also authorizes me to say that every effort will be made to use each student's special training in connection with specialized occupations in the army so as to afford technical students of draft age fully as great opportunity through the draft as if they enlisted now. Hollis Godfrey."

While this telegram indicates a concession on part of the Department of War, it does not go fully into the question of whether technical men should not be permitted to go on with their training. The medical and dental students have already been cared for in this respect.

On November 27th, Dr. Harold Balme, Professor of Surgery of the Medical School of the Shantung Christian University, China, addressed the entire student-body in the College of Pharmacy on the subject "Pioneer Scientific Medicine in China." The lecture was exceedingly interesting and pointed out the splendid opportunities open to those who would like to devote themselves to the development of scientific medicine and pharmacy in China.

PITTSBURGH

Dr. J. A. Koch, dean of the Pittsburgh College of Pharmacy, in an address on Dec. 5, complimented the members of the class of 1918 who took out insurance policies in the Pitt insurance endowment fund. He predicted that a new pharmaceutical building will result from the contributions made by the class. Albert St. Peter, executive secretary of the joint committee in charge of the campaign, also made an address to the class, in which he pointed out the benefits Pitt will derive from the drive of funds. He praised the class spirit shown by the pharmaceutical students.

The list of the class members who contributed follows: Anabel Gardill, Elizabeth Hurst, Nelle N. Nichols, Ethel Swan, T. L. Algeo, Henry Bluestone, Forest L. Boucher, C. F. Breslen, M. P. Bumbera, Edward Dwyer, J. G. Farquhar, W. L. Fleckenstein, John Fleming, Lawrence Fox, Harry Gordon, O. L. Harris, W. E. Hawthorne, N. E. Hallman, Clarence M. Hill, John L. Hilliard, Edward H. Hoak, W. Hoover, Jr., G. B. Johns, C. W. Kinkead, Ralph Kuhn, Samuel Larson, James H. Lash, A. Litman, R. L. Lohmire, J. W. Lutton, M. F. McNerny, H. K. Macfarlane, John D. Milligan, Earl E. Moran, R. E. Murtland, David Nathanson, W. G. Ogilvie, James A. Palange, Max Pechersley, William Rawson, J. H. Robertson, P. H. Ross, John M. Royston, Henry A. Sanders, R. C. Scollon, J. M. Sgarlata, Hyman Silverman, A. H. Sporck, R. O. Stainbrook, W. J. Stewart, M. J. Sullivan, J. Tarnapowicz, W. D. Wardlaw, H. M. Young.

The total amount subscribed by the class is $54,000.

OREGON AGRICULTURAL COLLEGE

Pharmacy students of the department of pharmacy, Oregon Agricultural College, Corvallis, numbering about 50 and headed by Prof. Adolph Ziefle, visited the plant of the Clarke, Woodward Drug Co., Portland, Ore., recently on a tour of inspection. The party following a banquet given to the students was shown through the laboratories by W. F. Woodward.

The Oregon Agricultural College has a regular military department which was established in 1872 and enrolled more than 1,000 cadets in 1916-1917; it has won recommendation from the U. S. War Department as one of the "fifteen distinguished institutions" of higher learning in the country.

CLEVELAND SCHOOL OF PHARMACY

The Senior class of the Cleveland School of Pharmacy has elected the following officers: President, Fabian Catalano; vice-president, Miss Cecile Gouvy; secretary, H. Mervis; treasurer, Miss Anna Dora; sergeant at arms, George L. McMahon. Officers of the Junior class: President, William L. Arscott; vice-president, L. H. Walker; secretary, E. F. Funck; treasurer, J. Rosenfeld; sergeant at arms, P. F. Brattin.

Dr. Emery T. Motley, recently appointed professor of chemistry in the college, was given a reception by the students on his arrival in Cleveland. He is a graduate of the Alabama Polytechnic Institute, Auburn, Ala.

UNIVERSITY OF OKLAHOMA

Dean H. S. Browne, Prof. C. V. Nichols and thirty students in the School of Pharmacy have joined the National Pharmaceutical Service Association, and are working for the passage of the Edmonds bill. Dean Browne is sending out 1,000 letters to pharmacists in Oklahoma and the surrounding states, asking them to lend their support to the bill by writing letters to their representatives in Congress.

Homer C. Washburn, who was dean of the School of Pharmacy in the University from 1904 till 1912, was recently commissioned in the army and is a major in the 157th U. S. Infantry, Camp Kearney, Cal. After leaving the University of Oklahoma he was dean of the School of Pharmacy in the University of Colorado. Before being advanced to the office of major, he was captain in the Colorado State Militia and served on the Mexican Border.

Dr. W. W. Stockberger, of the Bureau of Plant Industry, U. S. Department of Agriculture, wrote that he was sending forty or fifty medicinal plants, some of which were in the form of seeds. These plants are for the medicinal garden and will be placed in the University greenhouse until spring. Mr. Craven and Dean Browne will design the garden and make various experiments to see which plants will grow in this climate. Dr. Stockberger also sent a number of blue prints and pictures of the medicinal gardens at the University of Minnesota, University of Nebraska and the University of Washington.

UNIVERSITY OF MICHIGAN

Members of the Faculty of the College of Pharmacy met with Detroit alumni at the Fellowcraft Club in Detroit Dec. 1, to discuss plans for the celebration of the fiftieth anniversary of the college to be held at Ann Arbor next June. Those present were: Dean A. B. Stevens, Prof. Henry Kraemer, L. A. Seltzer, G. W. Schettler, H. W. Blome, J. W. T. Knox, F. F. Ingram, Jr., O. W. Gorenflo, F. W. R. Perry, A. S. Parker, F. A. Thompson and Charles E. Mann. The following committees were appointed: A. Committee on Schlotterbeck Portrait: Parker, Knox, Blome. B. Committee on Publicity and Invitations; Knox, Ingram, Taylor, Gorenflo, Seltzer.

The Pharmacy Faculty, in an endeavor to do its bit to support the Edmonds Bill, recently drew up the following petition, a copy of which was sent to all United States Senators and Representatives from Michigan:

"We, the undersigned, wish to call your attention to the following reasons why we urge your support of the Edmonds Bill known as Number H. R. 5531, which will be brought up in the December session of Congress, and which is intended to increase the efficiency of the Medical Department of the United States Army; to provide a Pharmaceutical Corps in that Department, and to improve the status and efficiency of the Pharmacists in the Army.

"1. It will increase the efficiency of the Medical Corps of the U. S. Army by supplying a place for specially trained men who can co-operate with physicians and surgeons.

"2. The enlistment of the professional services of properly qualified pharmaceutical chemists will enable physicians and surgeons to devote more of their time to the diagnosis and direction of the care of sick and wounded.

"3. It will give the profession of pharmacy a standing in the Medical Corps, and will afford an opportunity for the promotion of pharmacists for special services which they may render, and place the profession on the same basis as that already established for dentistry and veterinary practice.

"4. Not only as a war measure, but in the development of the U. S. Army in times of peace, there must of necessity be developed a closer association between Pharmacists and the Medical profession."

President Hutchins' name headed the list of signers, and it was followed by the names of the Pharmacy faculty, all the druggists of Ann Arbor, and the students of the college.

Contractors are pushing forward the work on the new General Library and the Michigan Union Club House.

Professional & Trade Associations

ILLINOIS Ph.A. TO MEET IN LA SALLE

At the recent semi-annual meeting of the Executive Committee of the Illinois Pharmaceutical Association held in Chicago, Secretary W. B. Day reported that seventy new members had been elected since the last annual meeting. Treasurer Garver, reported a balance of $939.28 in the treasury, and that in accordance with instructions of the association, he had purchased $700 worth of Liberty bonds. Mr. Holthoefer, who secured the largest number of new members and who was asked to tell how he did it, spoke on the necessity of personal effort and the need for an up-to-date leaflet informing druggists what the association was doing for them.

Secretary Elsner reported for the Travelers' Association in favor of La Salle as the next meeting place. He stated that it was near the historic Starved Rock and the new State Park, and had all of the advantages of location. the new Hotel Kaskaskis furnishing headquarters, while the rates were very reasonable. His report was adopted and it was decided that the association would hold its next annual meeting in La Salle on June 19-21, 1918.

In view of the changes made in the board of pharmacy by the new State legislative code, and the uncertainty concerning the expiration of the terms of office of the examiners, the executive committee decided not to send out voting cards but to select the nominees if any are required, at the annual convention. An appropriation of $150 was voted for the Committee on U. S. P. and N. F. Propaganda, as also an appropriation of $25 to cover the expenses of Editor Ormes in attending the next annual convention. Senator Boehm and Mr. Henry discussed the new alcohol rulings.

A local branch of the Washington Retail Drug Clerks Association was recently organized in Spokane, Wash. The meeting was held in the assembly room of the Chamber of Commerce, the thirty-six clerks who attended becoming charter members of the local organization. The following officers were elected: President, C. P. E. Dilatrush; vice-president, N. E. Bersing; secretary-treasurer, J. H. Bradbury; director of athletics, J. W. Rembowski. Standing committees were also named.

The Ohio State Pharmaceutical Association recently instructed its council of administration to take over, and run without profit to the association, the business of all members who may be called to the service of the country.

The St. Louis Retail Druggists Association and the Associated Retailers of St. Louis have passed resolutions indorsing the sale of Red Cross Christmas seals, which opened in St. Louis on Nov. 5. The campaign is in charge of the St. Louis Tuberculosis Society, and most of the drug stores have placed the seals on sale.

Druggists of San Antonio and Bexar counties, Texas, met recently at San Antonio and organized the San Antonio and Bexar County Association of Retail Druggists, the following officers being elected: President, W. C. Burns; vice-president, T. H. Milburn; secretary-treasurer, Don Yates; executive committee, A. M. Fisher, W. H. Grotthaus and O. E. Hughes.

BALTIMORE DRUG EXCHANGE ELECTS

At its recent annual meeting, the Baltimore Drug Exchange elected the following officers: President, J. E. Mealy; 1st vice-president, J. Emory Bond; 2nd vice-president, James E. Hancock; secretary, Geo. M. Armor, treasurer, H. H. Robinson; executive committee, Willoughby M. McCormick and Dr. A. R. L. Dohme.

Dr. Dohme delivered an address on pharmacy, past, present and future, and Mr. Hancock discussed Maryland's part in the history of the country. The meeting was of special significance from the fact that it is the last one of the Exchange to be held prior to the biennial session of the Maryland General Assembly, during which considerable legislation affecting the drug trade is expected to come up. A banquet preceded the business session of the Exchange.

NEW YORK R. D. A. TO HOLD ANNUAL BALL

The New York Retail Druggists' Association announces that complete arrangements have been made for its annual banquet and ball which is scheduled to take place on Friday evening. Jan. 18, at Terrace Garden, New York City. Pincus Herz, 331 Lexington ave., is the treasurer of the banquet committee and seats for the banquet table are $2.50 per plate, ball tickets 50 cents. Mr. Herz states that indications point to the largest affair of this kind the association has ever held, and that 25 per cent. of the receipts of the sale of boxes and ball tickets will be donated to the "Sun tobacco fund for our soldiers in France."

The Tri-County Druggists Association, which includes in its membership druggists of Ogle, Lee and Whiteside counties, Illinois, held its annual election at Rochelle recently, the following officers being selected; President, Robert Sterling, Dixon; vice-president, Frank Barker, Rochelle; secretary and treasurer, Dean Bickford, Sterling; board of control, R. W. Thorpe, Oregon, Charles W. Fenn, Prophetstown; and George C. Prescott, Dixon. Preceding the meeting the druggists attended a banquet at the Collier Inn, at which addresses were made by J. C. Senger, of the N. A. R. D., A. C. Kennedy, of Robert Stevenson & Co., wholesale druggists of Chicago, and L. J. Bertoli, representing the Fuller-Morrisson Co., also of Chicago.

The Kansas City Branch of the National Association of Drug Clerks was formed recently with the following officers: President, T. C. Dawless; 1st vice-president, H. E. Henry; 2nd vice-president, Lewis Hite; secretary, Trueman Linck; treasurer, H. E. Roland. About eighty drug clerks were present. The membership will be drawn from the drug clerks of Greater Kansas City.

Drug clerks of East St. Louis, Ill., have organized a Retail Drug Clerks Association with H. Viehman as president, C. Hoehn, vice-president and A. Mayerhoefer as secretary-treasurer. There are about twenty drug clerks employed in East St. Louis.

The Franklin County Pharmaceutical Society was organized at Bloomington, Neb., and elected the following officers: President, J. U. Malick; vice-president, H. J. Holst; secretary and treasurer, A. T. Reams. This is the first county association in the state to be recognized by the Nebraska State Pharmaceutical Association.

Patents and Trade Marks

PATENTS

Granted October 23, 1917

1,243,806—Margaret C. Buchanan, Chicago, Ill. Nipple for nursing bottles.

1,243,916—Worth R. Barringer, Denver, Colo., assignor to Public Safety Device Company, Guard for bottle corks.

1,243,965—Joseph N. G. Nesbit, Atlanta, Ga. Non-refillable bottle.

1,244,032—Howard F. Chappell, New York, N. Y. Manufacture of hydrofluoric acid from silicon fluorid.

1,244,205—Louis Heck, Newark, N. J. Dispensing device.

1,244,423—Fred H. Chapman, Winchester, Mass. Antirefilling bottle.

Granted October 30, 1917

1,244,580—Carl Bosch and Alwin Mittasch, Ludwigshafen-on-the-Rhine, Germany, assignors to Badische Anilin & Soda Fabrik. Producing ammonia.

1,244,901 and 1,244,902—Emil F. Scheller, Lorsbach in the Taunus, Germany. Method of producing acetaldehyde.

1,244,903—Nicholas Schuster, London, England, assignor to the British Coke Ovens, Ltd. Process of extracting ammonia from ammoniacal liquor.

14,388—(Reissue)—Lee F. Hawley, Madison, Wis. Process of producing phenolic bodies from wood-tar oils.

Granted November 6, 1917

1,245,180—Alexander Bogdanffy and John Alberti, assignors to the International Cork Co., Brooklyn, N. Y. Machine for the manufacture of bottle closures.

1,245,273—Frank V. Raymond, Auckland, New Zealand. Process for the treatment of kauri and other like gums.

1,245,292—Samuel T. Whitaker, Columbus, Ga., assignor of fifty-one one-hundredths to Ralph B. Small. Bottle closure attachment.

1,245,343—Henry Howard, Brookline, Mass. Process of making phenols.

1,245,353—Herbert S. Kimball, Newton, Mass. Process of making phenols.

1,245.267—Pablo Cogorno, Rosario, Argentina. Receptacle for liquids.

1,245,736—William H. Ketler, Camden, N. J., assignor of one-third to Alexander Macalister. Poison bottle indicator.

1,245,742—Burritt S. Lacy, assignor to Roessler & Hasslacher Chemical Co., New York, N. Y. Process of manufacturing paraffin ethers.

1,245,952—Robert M. Nichols, San Francisco, Cal., assignor of one-half to Charles F. Wagner. Bottle wrapping machine.

Granted November 13, 1917

1,246,033—Ernest A. Adams, Sumner, Wash. Funnel.

1,246,059—Maurice J. Couret, New Orleans, La., assignor by direct and mesne assignments to Louisiana Biological Products, Inc., Process of manufacturing a vaccin for the prevention of hog cholera and product therefrom.

1,246,099—Paul L. Hulin, Grenoble, France. Process for the extraction of chlorin,

1,246,399—Thomas B. Dixon, New York, N. Y. Apparatus for making vegetable infusions or extracts.

1,246,460—Anders A. Pindstofte, Copenhagen, Denmark. Revolving bottle cleaning machine.

1,246,739—Harry D. Gibbs and George A. Geiger, San Francisco, Cal. Process for manufacturing side-chain chlorin derivatives of toluol.

1,246,748—Carl Johnson, Mullan, Idaho. Bottle-seal.

Granted November 20, 1917

1,246,858—Alfred W. Bosworth, assignor to The Boston Floating Hospital, Boston, Mass. Milk serum powder and process of making same.

1,247,060—Joseph E. Zilk, Pittsburg, Pa., assignor to Odorless Fertilizer Manufacturing Co. Process of producing ammonia and potassium material from tobacco waste.

1,247,165—Karl F. Stahl, Pittsburg, Pa. Method of making sodium silicofluorid.

1,247,270—Harold Hibbert, assignor to Union Carbide Co., New York, N. Y. Method of preparing acetaldehyde.

1,247,278—M. L. Kaplan, Brooklyn, N. Y. Process for the oxidation of manganese carbonate.

1,247,334—Ernest Rudolfi, assignor to L. E. Erben Gesellschaft M. B. H., Berlin-Westend, Germany. Stable carbonic acid solution and method of producing same.

1,247,497—George H. Brown, Wilkinsburg, Pa. Bottle-stopper.

1,247,510—Camille Deguide, assignor of one-half to Desire Marbais, Charleroi, Belgium. Process for obtaining barium hydrate.

1,247,600—Emerson B. Priddy, Chicago, Ill. Collapsible tube holder.

Granted November 27, 1917

1,247,619—John S. Beckett, assignor of one-half to Percival R. Moses, New York, N. Y. Recovery of alkali.

1,247,629—Andre Brochet, Paris, France. Process of producing alcohol by hydrogenation.

1,247,655—John Frame, Searsport, Me. Mixer.

1,248,198—Charles G. Straub, Troy, N. Y. Lozenge-remover.

Granted December 4, 1917

1,248,560—George E. Shatto, Cleveland, Ohio, assignor to the Kilby Manufacturing Co. Percolator.

1,248,571—Francis J. Stokes, Philadelphia, Pa. Machine for applying and compressing powder on tablets.

1,248,608—Calvin S. Brown, Trenton, N. J. Bottle-opener.

1,248,675—Max Kowinsky, New York, N. Y. Tooth brush.

1,248,730—William A. Sexton, Newton, Mass. Oil clarifying and dispensing apparatus.

1,248,774—Wasyl Wozny and Paul Husak, Boundbrook, N. J. Non-refillable bottle.

1,248,867—Dion L. Johnson, Los Angeles, Cal. Process for producing molybdenum disulfid.

1,248,880—Harry McLoughlin, San Francisco, Cal., assignor of one-half to Frederick D. Carthew. Process of obtaining magnesia.

1,249,003—Henry A. Beyer, Corona, N. Y., assignor to Paragon Metal Cap Co., Brooklyn, N. Y. Bottle-capping machine.

1,249,017—Charles Brunkhurst, Middletown, N. Y. Multiple spoon measure.

1,249,025—Leslie R. N. Carvalho, Brooklyn, N. Y. Bottle capping machine.

1,249,289—Thomas Warnock Bigoney, New York, N. Y. Dispensing-top for containers.

Granted December 11, 1917

1,249,314—Chas. S. Bradley, New York, N. Y. Production of sodium hydroxid.

1,249,511—Sigmond Saxe, New York, N. Y. Manufacture of lactic acid.

1,249,541—Thomas C. Spelling, New York, N. Y. Shiftable closure.

1,249,641—Louis A. Lafrancois, San Francisco, Cal. Powder and puff box.

1,249,834—John R. Russell, Coalgate, Okla. Non-refillable bottle.

1,249,863—Victor Vincent Quimper, France. Process for the direct extraction of iodine from fresh or dried marine algae.

1,250,081—Thomas H. Bennis, Brooklyn, N. Y. Closure device.

PNEUMO-PHTHYSINE

Sam A. Gatcher, president of the Pneumo-Phthysine Chemical Co., Chicago, Ill., in discussing the quality and price of Pneumo-Phthysine as compared with similar specialties, states that Pneumo-Phthysine is composed of 50% C. P. glycerin, liquid guaiacol, quinine, wood tar creosote, methyl salicylate, formalin, and kaolin q. s. to make 100 parts, the preparation having the further advantage in that it is marketed in opal jar containers instead of tin containers as are employed by other manufacturers. By comparing this formula with the make-up of other preparations on the market, Mr. Gatcher says, any one can readily understand the therapeutic superiority and commercial advantages of Pneumo-Phthysine.

Mr. Gatcher claims that the therapeutic properties of Pneumo-Phthysine put it in a different class than that of all other specialties possessing a plastic product base of a similar nature. The latter are advertised as poultices and doubtless serve the claims made for them by their manufacturers, but Pneumo-Phthysine is advertised strictly on the claim made for its therapeutic properties, and principally on account of its quinine and guaiacol content. It contains a larger proportion of glycerin than other preparations of a similar class and is therefore more intensely hygroscopic, while the liquid guaiacol present makes it an active antipyretic, so that when the remedy is applied it reduces and holds the temperature within safe limits. The quinine sulphate content is also of sufficient proportion to impart the desired stimulation when used in cases of depression associated with colds, coughs, etc. The remedy finds its special application in pneumonia, while as an improved endermic antipyretic in the treatment of acute fevers and local inflammations it is being extensively employed. Pneumo-Phthysine is supplied in 8-ounce, 16-ounce and 32-ounce opal jars only.

When prescriptions are dictated by telephone, the following rule for guidance was adopted by representatives of the medical society and the board of pharmacy at a meeting held in April at Melbourne, Australia; the prescriber should first write the prescription, and then read it through the telephone to the dispenser. He should then request the dispenser to read to him the prescription as taken down, and should as soon as possible, forward the original prescription to the pharmacist either by post or by the patient.

ESTABLISHED 1887

THE PHARMACEUTICAL ERA

AN ILLUSTRATED MONTHLY PUBLICATION FOR THE DRUG TRADE

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THE EDMONDS BILL WITHOUT AMENDMENTS

As the Edmonds bill creating a commissioned Pharmaceutical Corps in the army and navy stands in its original form it contains provisions that are not wholly acceptable to all pharmacists, and there is some scattered sentiment in favor of certain amendments. It is to be sincerely hoped that this sentiment will not develop into any organized attempt to amend the bill now before Congress.

The strongest objection to the bill in its present form is the provision that only graduates of recognized schools of pharmacy shall receive commissions. It is very justly pointed out that while this clause is parallel with the clause governing the requirements for commissions in the Medical, Dental, and Veterinary Corps, yet conditions in pharmacy are different from those obtaining in the allied professions. There is less objection to the direct control of the Pharmaceutical Corps by the Medical Department, or to the provision which would require, as *Drug Trade Weekly* has pointed out, but one pharmacist on the examining board of three.

All druggists who have had practical experience with laws and law makers know very well that to tamper with a bill while it is up for passage by means of amendments is the easiest way to kill it. There is opposition to the Edmonds bills, despite the strong support that it is receiving not only from pharmacists, physicians, and army officers, and this opposition would delight to find the supporters of the bill in disagreement over its provisions. Let us all unite to pass the Edmonds bill. Later, after the Pharmaceutical Corps has been created, it will be possible to rectify any injustices in its provisions.

CAMPAIGN AGAINST VENEREAL DISEASE

The control and eradication of venereal disease presents one of the most serious problems with which those in charge of the health of the army have to deal. Statistics furnished by European authorities of the rapid increase of the disease among the troops of the various countries, and the reports of its alarming spread to all classes of the population, are staggering in their magnitude and disturbing in their import. With these in mind, it is no wonder that the reports of the disease among our own soldiers in the various camps throughout the country are considered of sufficient importance to give every thinking citizen the most profound concern. Not only do the effects of the disease create a serious problem with reference to military efficiency, but what is of vastly more importance, is the effect the disease may have on the health of coming generations. Drastic legislation and Billy Sunday methods should not be necessary to awaken druggists to the realities of such a menace to our national welfare and growth.

The National Council of Defense has issued a strong appeal to the pharmaceutical associations of the country to aid it in promoting a carefully planned campaign against the inroads of the disease. The Committee asks the druggist to send every case that may come to his attention to a reputable physician for treatment and to discontinue absolutely the sale of all gonorrhea and antisyphilitic remedies, except on the prescription of a physician, which prescription is not to be refilled. There may be a few druggists who will believe that such requests overstep certain so-called established customs, but if every druggist will thoroughly consider the subject, and then do his part in complying with the request, a positive advance will be made in the effort to stamp out the disease.

The question of giving aid to the objects of this campaign is one which should appeal to the conscience of every druggist. The possible revenue that is to be derived from the indiscriminate and uncontrolled sale of gonorrhea remedies is as nothing when one considers the menace the perpetuation of the disease inflicts upon the national health. The old time contention that if one druggist does not supply such medicines a competitor will, cannot be advanced as a moral reason why the practice should be continued. Neither will the plea that the physician will not prescribe, but will dispense the medicine for the patient himself, have any weight as an argument for continuing the practice of selling gonorrhea remedies. The druggist is not the keeper of his competitor or of the physician who dispenses, but he is responsible to his conscience for his own acts and the works he must do to promote the welfare of the nation. He should therefore do all in his power to aid the furtherance of the campaign against venereal disease. To do less would place him in the category of "slackers."

PROF. JOSEPH P. REMINGTON

The late Prof. Joseph P. Remington, mention of whose death was briefly noted in the last issue of the Era, held a unique and commanding position in American pharmacy. Entering the profession at a time when men with constructive ideas were needed, and equipped with the natural instincts and scientific training of a pharmacist, his experiences in the educational institution with which he was so long identified gave him a prestige and opportunity to advance that come to but few men. That he took advantage of these opportunities and left his mark upon the practice of pharmacy is the consensus of the tributes paid to his memory by his colleagues and fellow workers, while the work he did for so many years as Chairman of the Revision Committee of the United States Pharmacopoeia will entitle him to a distinguished place when the history of the inauguration of the new era started by the enactment of the Federal Food and Drugs law comes to be written. This work in itself was important enough to give him a rank with the distinguished scientists of his day, but it is not this record that will hold first place in the minds of those who received instruction from him or who worked with him in the many organizations with which he was identified.

His magnetic personality, charming affability and gentlemanly manners, were qualities that endeared him to every one with whom he came in contact. As a teacher, he was beloved by his students, thousands of whom came under his instruction in the fifty years of his college work, and all of whom carried back to their homes scattered throughout the length and breadth of the land cherished memories of the master who had guided them through the formative period of their lives and their introduction to the mysteries of scientific pharmacy. As an educator he had received inspiration and instruction from such men as Parrish and Procter, and with these examples before him he could scarcely do else than to develop the line of work these two distinguished American pharmacists had, perhaps, unwittingly plotted out for him. That he acquitted himself creditably in all of his undertakings, is shown by the impress of his character and ability on the literature of pharmacy, by his standing in the pharmaceutical associations and among the scientific organizations of his day, and preeminently, will he be long remembered as an educator whose influence permeated and will be for a long time reflected in colleges of pharmacy throughout the United States.

CHEMICAL MANUFACTURING BEFORE THE WAR

In considering the immense expansion that has taken place in the chemical industries since the beginning of the European war, many are apt to overlook some of the progress that has been made in this direction in the past history of our country. All will admit that the necessities of war have given an impetus to manufacturing the like of which was never before experienced, the division of chemical products especially now holding a premier position in our statistics of material growth.

But these activities do not mark the beginning of chemical manufacturing in the United States, as any one may ascertain if he will only take the trouble to consult industrial and commercial history. Just a century ago the Powers-Weightman-Rosengarten Co. established its plant in Philadelphia, and only recently the Mallinckrodt Chemical Works celebrated the fiftieth anniversary of its founding in St. Louis. Other concerns might be named which have done pioneer work in certain fields, but those mentioned are most familiar to pharmacists. During a long period and under conditions of peace both companies have been turning out chemical products complying with all of the requirements of our complex and exacting necessities. In reaching these milestones in their history both are entitled to the congratulations of the trade they have served so well.

Castor Oil as An American Product

Pharmaceutical Uses Now Overshadowed by Needs of Aviator for an Aeroplane Engine Lubricant

THE medical and pharmaceutical uses of castor oil for years have been of sufficient importance to give the product a place in the pharmacopoeias of most civilized countries, and up to 1877, perhaps, practically the only output for the oil was in pharmacy. About the date named, however, the employment of the oil in the manufacture of Turkey-red oils ("alizarine assistant") for calico printing, and its increased use for fat liquoring in the leather industries, created a demand for the oil that overshadowed all interest ever exhibited in this product. Of course, the agriculturist had used castor oil as a "wagon grease," and machinists had employed it to some extent as a lubricant. It was also found to be a valuable preservative for leather belting, and in recent years, a certain quantity was employed in the manufacture of sticky fly papers and for other purposes.

Aviators Operating at Varying Altitudes and Temperatures find Castor Oil an Ideal Lubricant for Aeroplane Motors.

But with the advent of the war, there developed a heavy demand for castor oil for aeroplane motor lubrication that attracted worldwide attention. Nothing like it had been known in history, and the despised castor bean, which was regarded as something of a nuisance in most every locality where it grew, was soon recognized as a valuable resource, and arrangements were made for harvesting the plant wherever it could be found. In this country, the growing of the castor bean for commercial purposes was long an established industry, Southern Illinois being the center of production, most of the beans being marketed in St. Louis, where large quantities of the oil were expressed. Expressing the oil was also followed on a large scale in other cities, but with increased shipping facilities from abroad, and the fact that large quantities of the beans could be produced from plants grown in tropical countries with practically no cultivation whatever, an element of competition was introduced which the American grower was unable to overcome.

Photo from Peter Henderson & Co.

The Castor Oil Plant Attains a Height of 10 *to* 12 *feet in the Middle United States, reaching* 15 *to* 20 *feet in hot climates, where it is perennial.*

The incidents growing out of the war, however, changed the situation entirely, and to meet the need for the vast quantities of castor oil now needed as a lubricant for aeroplane motors, the United States Government is offering every inducement for planters to resume the growing of the castor beans, the Signal Corps making contracts to buy at a fixed price all the castor beans that can be grown on from 75,000 to 100,000 acres. Of this acreage, it is said, Florida will plant 40,000 acres to castor beans, while contracts are being let in many of the States south of St. Louis and elsewhere throughout the country. In Florida particularly, the greatest interest is centered, one company already having several hundred acres planted in the neighborhood of Fort Meyer, and seed is being distributed to farmers in that vicinity.

As is well known, India has been the chief source of supply of both castor beans and castor oil for many years. As the war progressed, this source of supply became closed, the entire product being commandeered by the British Government, with the result that the price of the oil rapidly advanced as existing supplies became depleted. The situation had to be met and the West Indies and South American countries learned that they could find a profitable market in this country for their product, although the supply from that source has not been equal to the demand. Java and Italy have also produced some oil, for the plant is found growing wild or in a state of semicultivation in most tropical and subtropical countries.

As grown under cultivation, the ground is prepared as for other crops, and when there is no longer any danger from the spring frosts, the seeds are planted in hills and rows, much in the manner of planting Indian corn, with the exception that fewer seeds are put in a hill, usually only one seed being necessary, and that at every fourth row a space is left sufficiently wide to admit the passage of a team for the the harvesting of the beans. Unlike the cereal grains, the castor oil plant bears at the same time flowers and fruit, and the severity of the climate, which makes the plant in this latitude an annual, destroys its vitality while yet decked with bloom. The ripening commences in the South Central States in August and the crop is gathered at intervals from that time until the plants are destroyed by frost. The yield, as stated by different authorities, varies with the quality of the soil and the care of the culture. Twenty-five bushels from an acre of ground is considered a very large crop, and probably is seldom obtained. From sixteen to twenty bushels per acre is considered a very fair yield in a season not marked by drought or other unfavorable feature.

The castor seeds consist of 20 per cent. of husks, rich in mineral matter but containing no oil, and 80 per cent. of kernels, forming a white, softish mass. A toxic alkaloid known as "ricine," is found in the seed, as also a powerful fat hydrolyzing enzyme, which is used on a manufacturing scale for hydrolyzing oils and fats for soap-making purposes. The seeds contain 46 to 53 per cent. of oil.

Castor oil is produced on a large scale by expression or extraction, that used for medicinal purposes being obtained by first decorticating the seeds by passing them between rollers set at such a distance that the outer shell only is broken. The kernels are then separated from the lighter husks by means of currents of air driven through a "separator," and then subjected to pressure in the cold, the product thus made being usually designated as "cold drawn." Medicinal oil can only be prepared by expression in the cold, as the "ricine," does not pass into the oil under these conditions. "First pressings oil," is pressed under heat and "seconds" is the term applied to the residue, the oil being obtained either by means of solvents or the use of acid. Following the expression of the oil from the seed in the cold, the once expressed cake is very frequently subjected to a second, and sometimes, a third expression. The oils so obtained are unfit for medicinal purposes and are employed in manufacturing processes. The expressed cakes retain the poisonous alkaloid, and cannot therefore be employed as cattle foods, as is done with the cake left after expressing the oils derived from some other seeds. This pomace, however, contains certain nitrogenous constituents which admirably adapt it for use as a fertilizer, the United States Bureau of Soils considering it to be one of the best applications to restore the fertility of the soil. Lewkowitsch states that the richness of castor cake in fertilizing constituents has chiefly contributed to the growth of the castor oil industry in Marseilles, as the residual cakes are readily bought in that locality by the growers of early vegetables. Besides being used for manure, the expressed cakes are also employed in India as fuel and for caulking timber for the destruction of white ants and other pests, and for stuffing the soles of natives' shoes. The use of the plant has also been recommended as a possible source of paper pulp, but so far, this suggestion has not been commercially developed.

The process of refining castor oil consists chiefly in the removal of albumen by steaming the oil. This treatment coagulates the albumen, also that part of the enzyme which has passed into the oil, both of which are removed by filtering. As described in the Pharmacopoeia, castor oil is a viscid, transparent, almost colorless or pale-yellow liquid, having a faint, mild odor, and a bland, afterwards slightly acrid, and generally nauseating taste. This taste has made the administration of the oil to children, and many adults as well, one of the serious problems relating to its use. To overcome these objectionable features, physicians, pharmacists and manufacturers have turned out in amazing quantities, so-called "tasteless" forms of the oil, emulsions, aromatic combinations, etc., but for medicinal use, none of these preparations has ever taken the place of the oil in its unmasked condition. Medical literature is replete with the suggestions that have been made to the patient for easy and tasteless administration. For such purposes the oil has been floated on orange juice, coffee, gruel, and foaming beer. The patient has been told that if his mouth be chilled with broken ice immediately before taking the oil, that the taste of the latter will be imperceptible. In fact, the methods suggested are as numerous as the idiosyncrasies of humanity, and the patient who is compelled to take the oil will generally return to the "straight goods" style, gulp down the nauseous dose, and hope for the best.

Castor oil will continue to hold its place in the pharmacopoeias of the world, but its use for this purpose will be overshadowed by its greater employment in the arts and industries. It possesses the advantage of not being affected by extremes of heat and cold, making it the ideal lubricant for many kinds of machinery, and especially for aeroplane motors which are required to work at varying altitudes and temperatures. The increasing uses for the oil strengthen the belief that before many years the United States will again be growing this plant on a large commercial scale.

New Antiseptic in Military Surgery

Dichloramin-T, a Synthetic Germicide Now Used in the Treatment of Wounds

Interior of a Ward of an Army Hospital on the Western Front. Note new equipment for providing scientific surgical and medical treatment under aseptic conditions—British official photograph.

ANYTHING which has to do with successful asepsis is of unusual interest at the present time in view of the necessity of treating large numbers of wounded soldiers and the need of returning them to service as soon as possible; also that their hospital places may be taken by others constantly being brought in from the field of battle.

Pharmacists are peculiarly interested in researches and discoveries, not only from the laboratory angle, but as professional men and patriotic citizens from the success of such preparations in actual surgical practice.

A most interesting report was printed in the July, 1917, issue of the *Journal of the American Medical Association*, which gives the summary of the experiences of H. D. Dakin, D.Sc., of the Herter Laboratory, New York; Walter Estell Lee, M.D., of the Pennsylvania Hospital, Philadelphia; Joshua E. Sweet, M.D., professor of surgical research, and Byron M. Hendrix, Ph.D., instructor in physiologic chemistry, University of Pennsylvania, school of medicine, and Robert G. Leconte, M.D., of Philadelphia.

It is interesting to note in passing that Dr. Lee is the son of the late W. E. Lee, prominent pharmacist of Philadelphia, and of Mrs. Nellie Florence Lee, long prominent in pharmaceutical circles. Dr. Lee has made extensive experiments with and successfully employed dichloramin-T in the treatment of wounds.

Scientists have long searched for a perfect germicide. Lord Lister made the first important step in advance when he applied the principles laid down by Pasteur to the practice of surgery in which he was especially interested. According to modern surgery, the perfect germicide must meet two requirements: "It must kill all parasitic life while causing no harm to any cell of the living body."

This is more difficult than would at first appear, for most of the infective agents are more closely related to the plant or vegetable kingdom than to the animal kingdom, and plant bacteria resist death-dealing agents more persistently than do the living cells of the human body.

Certain groups of infective agents have been in a measure conquered, but the great problem of surgery which is bacterial infection, is by no means conquered in its entirety. Fortunately the human patient exerts a natural resistance to bacteria and in ordinary cases where the wound is not infected to begin with, soap, water, and alcohol, together with this natural resistance, have sufficed. But military surgery is a different matter for the wounds come for treatment loaded with infection.

Experience of surgeons with English and French wounded, and particularly the work of the American Ambulance in Paris, tends to show that with the exception of the chlorin preparations, all other antiseptic agents strong enough to be effective, really hindered rather than helped in the control of suppuration and the process of repair.

The drawback to irrigating wounds by the hydraulic system by means of modifications of Labarraque's solution, were that such solutions had to be made with great care and freshly prepared almost daily; also that these chlorin solutions have a highly irritating effect upon the skin if they remain in contact with it for any length of time, calling for special protection of the skin or else unfortunate reaction in the way of burning, itching, and painful surfaces resulted.

The method developed of protecting such skin surfaces has been to apply vaseline on sterile gauze. Weakening the chlorin solutions to the point that they were non-irritating made them of doubtful value, and to confine the chlorin solution to the wound cavity meant that such solution had to be constantly renewed on account of the rapidity with which it united with the protein and other exudates of the wound, changing its nature entirely. Hence the necessity of constant immersion in the solution and the regular renewal, making the dressing by this means complicated and time-devouring.

The investigations of the group of physicians mentioned indicated that a different principle may be applied to good purpose—namely, the use of a liquid dressing which unites with the protein and wound exudate material in such a manner as by chemical action to become active rather than inactive. It was argued that if such a remedial agent could be found, the dressing would continue to be effective over a period of several hours; would be less troublesome; and would hasten the process of healing by the constant destruction of harmful bacteria.

Such a preparation was finally located and experiment has found it to be satisfactory to an astonishing degree. The chemical used is sodium salt of toluene-parasulphochloramin. This is now being marketed under the trade name of chlorazene. The report of the eminent surgeons declares that: "This synthetic chloramin is non-irritating to the skin and wound surfaces, and can be used in aqueous solutions in a concentration of 2 per cent., which has approximately four times the germicidal value of the currently employed solutions of hypochlorites."

This was a distinct step in advance in two particulars—first, in that the skin and wound were not irritated; and second, in that the chemical reaction and the process of disinfection were one and the same. However, the drawback still was that being an aqueous solution, it disappeared in the course of about two hours and had to be renewed.

To overcome this rapidity of disappearance and absorption, it was finally decided to dissolve an excess of the chloramin in an oily medium which would render it more stable and allow it to part with its remedial property more slowly as it diffused into the surrounding wound.

For this purpose, a dichloramin was used (toluene-parasulphondichloramin) which is better known by the name of dichloramin-T. Its users declare that: "As a solvent we have used eucalyptol chlorinated as described below with or without liquid paraffin, similarly chlorinated, to limit their decomposing action on the dichloramin-T."

It has been found that a ten per cent. solution of dichloramin-T in eucalyptol, may be kept in a colored bottle for at least thirty days, with but twenty-five per cent. decomposition. This gives a solution from twenty to forty times the mass of germicide ever possible to have present in the usable concentrations of hypochlorites, and permits of a dressing which will liberate its germicides slowly over a period of from eighteen to twenty-four hours, instead of from thirty or forty minutes to one hour.

A Ward in a Military Hospital in Jerusalem
Underwood & Underwood Photograph

According to the report of Doctors Dakin, Lee, Sweet, Hendrix, and Leconte, the preparation of dichloramin-T was worked out for Chattaway's method of preparation, which was very fully described in last month's Era, page 380. The preparation of "chlorinated eucalyptol" is prepared as follows:

Eucalyptol (U.S.P.), not eucalyptus oil, must be used. Five hundred cc. are treated with 15 gm. of potassium chlorate and 50 cc. of concentrated hydrochloric acid. After twelve hours the oil is well washed with water and sodium carbonate solution. Dry sodium carbonate is added to the oil. and the mixture is allowed to stand twenty-four hours. It is then filtered and dried with a little calcium chloride.

Preparations of Chlorinated Paraffin Oil

Five hundred cc. of commercial liquid petrolatum are treated with 15 gm. of potassium chlorate and 50 cc. of concentrated hydrochloric acid. The mixture is exposed to the light and allowed to stand over night. It is then put into a separatory funnel, and washed successively with water, sodium chloride solution, and water. The opalescent oil is tapped off, a lump or two of calcium chloride and 5 gm. of charcoal are added, and the oil is filtered with suction.

In order to determine the amount of liquid petrolatum which can be added to the eucalyptol solution of dichloramin-T, the following mixtures were made:

Solution 1: 1 part liquid petrolatum to 2 parts 15 per cent. eucalyptol solution.

Solution 2: 1 part liquid petrolatum to 1 part 15 per cent. eucalyptol solution.

Solution 3: 3 parts liquid petrolatum to 5 parts 15 per cent. eucalyptol solution.

Solution 4: 2 parts liquid petrolatum to 1 part 15 per cent. eucalyptol solution.

These solutions were placed in test tubes, stoppered tightly, and preserved in the refrigerator at about 0° C. All solutions became somewhat turbid as soon as the liquid petrolatum had been added, but in 48 hours there was no appreciable settling out in any case. After a week, however, the dichloramin-T had partially crystallized from solutions 3 and 4. Solutions 1 and 2 were no more turbid than just after the addition of the liquid petrolatum, and none of the dichloramin-T had crystallized out.

This experiment seems to justify the conclusion that no more than an equal part of liquid petrolatum should be added to a 15 per cent. solution of dichloramin-T in eucalyptol when the solution is to be kept for any length of time, but when the mixture is to be used immediately, as much as two parts of liquid petrolatum to one of the 15 per cent. eucalyptol solution may be used.

The report states that in comparing the practical surgical value of dichloramin-T with aqueous hypochlorite solutions in the treatment of infected wounds, which in spite of many serious objections has given such promising results, the laboratory and clinical findings thus far warrant the following statements:

1. Dichloramin-T is a non-irritating synthetic germicide, and corresponds to the antiseptic chloramin substances found in minute quantities when nascent chlorine of the aqueous hypochlorite solutions is brought into contact with the exudate of suppurating wounds.

2. Dichloramin-T can be used in strengths of twenty to forty times greater than is possible with the hypochlorites and in oily solution which makes possible the slow elaboration of the germicide over a period of from eighteen to twenty-four hours instead of a rapid disappearance in from thirty minutes to one hour as with the hypochlorites.

3. Its use is as simple as the application of the tincture of iodin, and we can see no reason why it cannot be used to replace iodin as a primary dressing. In our experience it is just as effective as a germicide, and is without the destructive effect on the tissue cells. We have had the opportunity of using it in this way at the primary operation in seven wounds involving soft tissues, tendons, joints and bones, and have not failed to have primary union. One case, a compound fracture of a metacarpal with severed extension tendons, did not receive treatment until three hours after the injury.

4. The chlorin in dichloramin-T, as in the hypochlorites, has the power of dissolving dead tissue. Hemorrhage, therefore, must be stopped by ligation, else the clot will dissolve and secondary hemorrhage may follow.

5. One should not depend on a chemical agent to perform, in the treatment of suppurating wounds, for that which and should be done quickly and thoroughly by mechanical means. Neither chemistry nor bacteriology can or should be expected to replace the mechanics of surgery. At the best these chemical germicides can react only on the bacteria with which they actually come in contact, which means a very superficial process. Therefore, at the primary operation all infected tissue, foci and devitalized tissues must be removed when possible by surgical procedures. Finally, adequate drainage, dependent if indicated, must be provided.

The details outlined in this report show the direction of the progress of medicine by the modern scientific method. It is certain that if the therapeutic application of many of the synthetic remedies that have made claim for professional recognition had been as carefully studied as dichloramin-T has been, there would have been fewer disappointments to record in the appropriation of remedial measures to the curing of disease. War is accompanied by atrocities, pain, disease and death, but history teaches that in its wake have followed some measures which have marked certain advancements in the experience of humanity. That the science of medicine will profit by the investigations prompted by the necessities of the great contest now waging, is positive and convincing. The surgeon, chemist and pharmacist will each have their particular problems to solve, and the work that is now being done may be taken as indicating the future line of advance.

Metric Terms for Chemicals

A catalogue giving price lists of chemicals in metric terms, issued by Eberbach & Son, was exhibited and explained at the Pittsburgh meeting of the American Metric Association, December 28-29. An announcement in the front of the catalogue says:

> The chemicals listed herein are carried in stock in bottles of 25, 100 and 500 grammes or of the sizes corresponding with the quantities priced in the list, and there will be no delay in filling orders when made in these quantities. If other than above mentioned packages are ordered, proportionally higher prices will be charged to cover difference in containers and handling. (25 grm.= ⅞ oz. 100 grm.=3½ oz. ½ ko.=1-1/10 lb.)

Prices include containers.	25 grm.	100 grm.	½ ko.
Acetone, B. 562-564° C.	$0.15	$0.30	$1.00
Acetylchloride	.35	1.00	..
Acid acetic-glacial, S. G. 10.58=99%	..	.25	.60
Acid acetic-glacial, S. G. 1.064=96%	..	.20	.45
Acid acetic, S. G. 1.060=50%	..	.15	.30
Acid acetic, S. G. 1.041=30% R.	..	.15	.25
Acid acetic-anhydride	.30	.80	..
Acid arsenic anhydride	.15	.35	1.30
Acid arsenious. Arsenic pure	..	.10	.15
Acid arsenious, lump	..	.15	.35
Acid arsenious, powder	..	.15	.45
Acid boric	..	.15	.45
Acid carbolic, phenylic	..	.25	.85
Acid carminic	2.50	..	..
Acid chloric, S. G. 1.120	.25	.60	1.75
Acid chromic-cryst. Sulfuric acid free	.25	.60	2.00
Acid chromic-solution	..	.20	.60
Acid citric-cryst	..	.20	.60
Acid citric-C. P.	.15	.30	1.00
Acid formic, S G. 1.220	.40	1.25	5.00
Acid formic, S. G. 1.120	.15	.30	1.00
Acid gallic, pure	..	.25	.90
Acid gallic, C. P.	.25	.65	2.50

Sterilization of Pharmaceutical Products[*]

By J. ATLEE DEAN

The emphasis placed on the different methods of sterilization by the new revisions of the United States Pharmacopoeia and National Formulary have caused pharmacists to study the subject from many directions. In his paper Mr. Dean describes some of the problems with which the pharmacist has to deal. To do satisfactory work and to perform intelligent service the pharmacist must qualify himself by proper scientific training and possess thorough equipment. The more complex medicinal products are, the more need there is to understand their manufacture.

IT IS not the purpose of this paper to discourage scientific pharmacy, but the writer feels that the time is now ripe when attention should be called to certain important facts regarding this subject. He believes it is necessary that warning be given before it is too late and discredit comes to the science of pharmacy. The pharmacist is the logical man, and often the only person the physician and public can call on for these products; therefore he must prepare himself to furnish them. These products are large in variety. They include not only solutions for hypodermoclysis, ampoules, eye solutions, and other pharmaceutical preparations, but often such articles as medicine and eye droppers and even tooth brushes, catheters, and products, the sterilization of which the pharmacist could use as an advertising means to sell the articles themselves and impress the public with his ability.

The United States Pharmacopoeia, Ninth Revision, took a step in the right direction when it included a chapter on "Sterilization." To the writer's mind, the outstanding statement in the whole chapter is the remark that "The important subject of sterilization cannot be treated with any great degree of particularity, nor can the intricate details of scientific technique be fully described in this chapter." This monograph is worth study, as it impresses the fundamental points of this important subject. The main difficulty appears to be that the pharmacist confuses pasteurization and sterilization. To the mind of a bacteriologist there is no such thing as approximately sterile. To him a solution is sterile or contaminated. The pharmacist must reach this same mental attitude.

A short time ago the pharmacists were highly enthused over the commercial possibilities of sterile solutions in ampoules. Many were preparing and selling these products to the physicians. Unfortunately there are still a few pharmacists who believe that a pint graduate and an old mortar are sufficient equipment for a modern prescription pharmacy. These same men labor under the impression that an old stew-pan completes an up-to-date bacteriological laboratory. It is this type whose wild ambitions we must curb. The reliable man demands thorough equipment both as to apparatus and knowledge This war has brought out strongly the fact that tetanus we have with us always Theobold Smith calls attention to the uncertainty of the temperature at which tetanus spores are killed. He shows that some require temperature possible only with an autoclave. As Stitt well remarks. "In view of the danger of tetanus, it is advisable to carefully autoclave all materials going into vaccines, such as salt solution, bottles, etc." This statement holds equally good for all preparations intended for hypodermic injection.

During the excitement over ampoules we conceived the idea in my laboratory to test the thoroughness with which the pharmacists were sterilizing ampoules. Our first thought, of course was as to whether they would kill bacillus tetani, but we hesitated to furnish them with cultures of this pathogenic organism to pollute other ampoules. We therefore, decided on the non-pathogenic bacillus subtilis. This we prepared by placing some timothy hay in nutrient bouillon and boiling for some little time. This was then incubated over night and subcultured. This culture of the hay bacillus was then used to inoculate some powdered culture media. This material was furnished various pharmacies to be placed in ampoules and sterilized. It was delivered by assisants who remarked that it would stand any amount of heat. Unfortunately for the experiment, half of the material was sent back to the laboratory for preparation. Of the remaining, two had not been rendered sterile. The sterile ones had no doubt been boiled for a long time in strong salt solution or had been heated on successive days or more than likely our methods of preparation of the culture had attenuated the organism so that it was more easily killed. However, from this experiment one can observe the danger from inaccurately prepared hypodermic preparations. Of course, these tests may be objected to on the grounds that many ampoules are prepared from chemicals such as the mercury salts and others that would sterilize the solution themselves with little or no heat.

Nevertheless, there is great danger left from the remaining solutions that are not germicidal of themselves. In this work, as in bridge building, a margin must be allowed for safety. It is not to be expected that every ampoule or even one in ten thousand will infect the patient with a pathogenic organism. Our natural immunity and the fact that many pathogenic bacteria soon die if not placed in proper media and temperature prevent this. It will be the one millionth one that will cause the pharmacist to lose his position as a scientific worker. How may this be prevented? We have stated that the pharmacist was the logical man for this work; but he must prepare himself for these duties, first, by scientific training, and second, by thorough equipment.

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[*] Read before the Pennsylvania Pharmaceutical Association.

Let us observe the knowledge and skill necessary for the preparation of an ampoule of a simple alkaloid. First must come the scientific knowledge as to the solubility of the drug and the selection of the proper solvent; the solvent to be adapted to the substance and non-irritating to the tissues. The chemistry of the glass ampoule must be taken into account, for if we place our alkaloid in a container of alkaline glass it will be precipitated. The solvent and ampoule should be sterilized under pressure previous to dissolving the drug, as no doubt our alkaloid will be decomposed at a high temperature. The sealed ampoule should then be sterilized with the proper amount of heat. After this the ampoule should be tested for sterility. This should be done both aerobically and anaerobically upon the proper culture media.

If the solution be antiseptic of itself we must be careful that we dilute it sufficiently to overcome this action. It can thus be seen how a simple sterile pharmaceutical preparation requires pharmaceutic, chemic, and bacteriologic experience. From what has been said it might be thought that the pharmacist was not the proper person to furnish these preparations. The pharmacist will always be the purveyor of medicinal products, and the more complex they are, the more need to understand their manufacture. The medication of the future will not only be subcutaneous, but also intramuscular and intravenous. It, therefore, behooves the energetic pharmacist to furnish these products for his financial reward and honor of his profession.

BRUCK'S SEROCHEMICAL TEST FOR SYPHILIS

Answering an inquiry on the technic of this test, the editor of the *Journal of the A. M. A.* gives the following information: Nitric acid when added to syphilitic blood serum causes a precipitate to form. Bruck's technic is based on an acid containing, per hundred gm., 24.77 gm. of nitric acid, or, per hundred cc., 28.48 cc. of nitric acid with a specific gravity of 1.149. He uses 0.3 cc. to 0.5 cc. of clear serum, 2 cc. of distilled water are added. This is shaken, and then 0.3 cc. of nitric acid is added with a standardized pipette. This is shaken and permitted to stand at room temperature for ten minutes. Then 16 cc. of distilled water at 15° C. are added and shaken slowly three or four times so as not to foam. This shaking is repeated ten minutes later, and then the tube is set aside for one-half hour. If the serum is syphilitic it shows a distinct turbidity in twelve hours, and a precipitate is piled up on the floor of the test tube. If the serum is non-syphilitic, there is no precipitate at any time.

Hydrion is a new wound antiseptic devised by Dr. Thos. Lissman, Bolton, England, and is made as follows: Mercury perchloride, 4.375 grains; calcium chloride, 1.85 grains; sodium chloride, 34.76 grains; potassium chloride, 0.076 grains. Make into 40 grain tablets. One tablet is to be dissolved in a pint of water to make an antiseptic solution.

Chemical Glass from Perth

John Moncrieff (Ltd.), of Perth, Scotland, is manufacturing chemical glass to supply the demand since imports from Germany were cut off. Vice-Consul Pottle, of Dundee, tells of the difficulty the firm experienced in obtaining suitable labor, finally taking six Belgians, who had been trained in factories making thin molded glassware.

It is believed that prior to the war the production of the world's supply of chemical glass was almost exclusively in the hands of German and Austrian manufacturers who did everything possible to foster the industry, not only for its intrinsic worth as a source of national wealth, but because they recognized it as a pivot or "key" industry. Without the research work, the testing of processes and results, and the analysis carried out in laboratories by means of chemical and scientific glassware, many vital industries could not exist.

For the production of chemical glassware the firm of John Moncrieff has made substantial extensions to its works. A large one was completed in 1916, and the erection of another is now almost finished, while plans are practically completed for a third addition which is to be a duplicate of the original extension.

It is claimed that the product of Messrs. Moncrieff has been proved by exhaustive comparative tests, carried out by British scientists, to be superior to the best German. Besides the commonly known chemical glassware articles, such as beakers, flasks, hydrometers, and graduated ware, Messrs. Moncrieff equipped practically the whole of the British Government and controlled explosive factories with the glass apparatus for the condensation of nitric acid. This likewise in previous times was exclusively German, and the method and manner of production was most difficult and complex, involving also the training of new and highly skilled labor.

Among the important articles manufactured by this firm, also in prewar times exclusively German, are glasses for coal miners' safety lamps. These have to be very strong and reliable, as breakages mightly easily lead to disastrous explosions. No miners' lamp glasses can be used in a coal mine unless approved by the Home Office, after being subjected to tests of the greatest severity. The glasses made by Messrs. Moncrieff withstand all tests to which they are subjected, and therefore are all branded with an exclusive mark protected by the Home Office. Among other articles of special interest which are made by the thousand every week are pulsator glasses, used in aeroplanes, and special tubing for mine horns in deep-sea mines.

PLAN TO TAKE OVER CHEMICAL INDUSTRIES

A plan is under consideration in Washington for taking over the chemical industries of the country in so far as they are an adjunct of war preparations. The general plan contemplates federal control of the coal, iron, oil and chemical production of the United States on the same basis as the railroads. A bill is about to be introduced in Congress proposing to give the President the power to supervise and name directors for these industries.

This step is regarded as necessary in order to speed up war preparations and remove for the period of the war, commercial rivalry, competition and all factors which in any way are likely to curtail production and prevent united effort in these industries.

—Cyrus P. Walbridge, president of the Merrell Drug Company, of St. Louis, Mo., has been appointed by Governor Frederick D. Gardner as a member of the State council of defense.

The Halifax Druggists Relief Fund

A splendid start has been made towards the fund being raised by the druggists of America to make good the losses, uncovered by insurance, which their professional brothers suffered in the Halifax explosion and fire. A total of $1,364.85 *has been received by* THE PHARMACEUTICAL ERA *Fund, and the New York and New England Committee collected* $99.00 *at the recent mid-winter meeting of the Connecticut Pharmaceutical Associations.*

But the need is very great, and active plans for the swelling of this fund are being pushed by the various state organizations, who, through the co-operation of jobbers' and manufacturers' salesmen, are soliciting the retailers of New England and New York, and by mail are making an appeal to makers of goods handled by them and by the Halifax trade. Pharmacists all over the country, for the work of this special committee is confined to its own states, are earnestly urged to contribute to the ERA *Fund, the treasurer of which is Thomas A. Hedley, American manager of the National Drug & Chemical Co. of Canada, general administrators of both funds. A druggist of Cuba has set us all an example and given us an inspiration by contributing* $500. *Send checks to Mr. Hedley, care* THE ERA, *3 Park Pl., New York. Give quickly and give generously.*

AT THE special meeting of the New York and New England Committee for the Relief of the Halifax Druggists, which is composed of the presidents of the various state associations, held in Springfield, Mass., Jan. 21, C. P. Thompson, of Springfield, told a thrilling story of the havoc raised in the drug stores of Halifax and of the brave spirit in which the Halifax druggists not only came to the first aid of their stricken fellow-townsmen but in the face of great obstacles have since carried on their businesses.

Mr. Thompson visited Halifax shortly after the disaster as the special representative of the New York and New England Committee in order that he might get an accurate first hand report of the needs of the druggists of that city. What he found beggared description save in the interesting snap shot he brought back.

Every single one of the thirty-one drug stores in the city suffered more or less damage. Three were completely wiped out. In almost every case the greatest damage was done by the explosion, which treated the drug stores, according to one of the men who went through it, just as if a giant had grabbed the building and shaken it. Bottles were tumbled from the shelves, plate glass was forcibly blown in, wall cases torn from their position and in many instances counter cases were broken up.

All of the damage caused by the explosion is absolutely unrecoverable by insurance, while in the cases of the stores that were also burned, it will be a matter for adjustment with the insurance companies as to what part of the stock was absolutely unharmed before the fire came. It is not expected that many of the druggists will be able to recover much insurance. The total actual physical losses of the Halifax druggists, as published in itemized statement in the January ERA total nearly $50,000. Nor does this cover the losses of the debts owed to the druggists by the people killed in the disaster or the vast stocks of first aid supplies that the druggists gave freely to sufferers at the time of the catastrophe.

The New York and New England Committee after listening to Mr. Thompson's vivid description of the need of the Halifax druggists, outlined plans for the raising of the committee's full share of the relief fund. C. S. Ramsay reported that at the meeting of the Connecticut association in Bridgeport $99 had been raised, and every druggist in the state was now being solicited through the salesmen of jobbers and manufacturers to contribute to the fund. This plan is also being adopted in the other states, and the committee voted to write a letter to manufacturers selling goods handled by the trade in Halifax asking for subscriptions.

It was also voted that all contributions to this fund should be acknowledged by publishing the address of the donor and the amount given in THE PHARMACEUTICAL ERA.

All members of this special committee except H. C. Buxton of Maine, who found it impossible because of the railway tie-up to attend, were present at this meeting: R. A. Austin, Cairo, N. Y.; C. S. Ramsay, New Britain, Conn.; Walter S. Doane, Worcester, Mass.; Wm. G. McCullis, Bristol, N. H.; N. F. Reiner, Providence, R. I., and Fred W. Churchill, Proctor, Vt.

Contributions to the Era Fund are led this month by Dr. Ernesto Sarra, wholesale and retail druggist of Havana, Cuba, who forwarded his check for $500 with these inspiring words: "I realize the magnitude of the disaster and I am in sincere sympathy with the Halifax druggists and it is a great pleasure for me to give every help to our cause in the Great War. Be kind enough to subscribe me with $500 for the Halifax Druggist Fund."

The wholesale firm of Kirk, Geary & Co., Sacramento, Cal., undertook on their own initiative to raise subscriptions among the druggists of that city, and these subscriptions with their own contribution amounted to the handsome sum of $95. The Retail Drug Club of Selma, Ala., sent an official contribution of $10. Several of the manufacturers, as will be seen by the accompanying acknowledgments, have come forward with generous gifts. From various sections of the country contributions have come to hand, showing that this worthy cause makes a direct appeal to every American druggist:

The following contributions have been received through the New York and New England Committee for Relief of the Halifax Druggists—E. S. Ramsey, Treasurer:

John T. Howes, Milford, Conn.	$5.00
Jacob Neikind, Bridgeport, Conn.	3.00
P. J. Garvin, Betkel, Conn.	1.00

Contributors to Halifax Fund

K. J. Demtoft, Bridgeport, Conn.	$5.00
Chas. Gustafson, Jr., Hartford, Conn.	3.00
P. G. Buck, Hartford, Conn.	3.00
H. C. Hodge, East Hampton, Conn.	1.00
D. G. Sullivan, Watertown, Conn.	1.00
J. N. McNamara, Bridgeport, Conn.	1.00
Chas. E. Keith, Bridgeport, Conn.	1.00
Benoit Buzfelder, New Haven, Conn.	5.00
Arthur Waweman, Danbury, Conn.	1.00
E. O. Engstrom, Pittsfield, Mass.	2.00
Louis Montenare, New Haven, Conn.	1.00
T. P. Gillespie, New Haven, Conn.	1.00
Jacob Neikind, Bridgeport, Conn.	3.00
C. H. Pinks, Meriden, Conn.	2.00
J. A. Hodgson, New Haven, Conn.	5.00
L. R. Farrell, New Haven, Conn.	1.00
Walter A. Hussion, New Haven, Conn.	1.00
H. H. Rockwell, Bridgeport, Conn.	1.00
Westport Drug Co., Westport, Conn.	1.00
S. W. Smith, Ansonia, Conn.	1.00
A. L. Dickinson, New Canaan, Conn.	1.00
Fred E. Shepard, So. Norwalk, Conn.	1.00
I. H. Ievy, West Haven, Conn.	2.00
J. M. Jacobs, New Haven, Conn.	1.00
E. A. Nolan, Torrington, Conn.	5.00
H. A. Scharton, Bridgeport, Conn.	2.00
John B. Ebbs, Waterbury, Conn.	2.00
B. E. Hockert, Hartford, Conn.	1.00
M. C. Peturccelli, Bridgeport, Conn.	1.00
M. J. Keane, Whitneyville, Conn.	2.00
R. T. Farnum, Canaan, Conn.	1.00
J. J. Kausmann, Bridgeport, Conn.	1.00
H. Theodore Graeber, Meriden, Conn.	1.00
J. A. Leverty, Bridgeport, Conn.	1.00
H. E. Purdy, Derby, Conn.	2.00
F. B. Burr, Stratford, Conn.	1.00
W. H. Wood, New Haven, Conn.	2.00
Frank E. Ballard, Bridgeport, Conn.	1.00
Frank A. Silk, Norwich, Conn.	1.00
Chas. T. Hull, New Haven, Conn.	3.00
H. M. Leron, Norwich, Conn.	5.00
S. H. Williams, New Haven, Conn.	1.00
H. C. Dotten, New Haven, Conn.	1.00
Frank S. Porter, Bridgeport, Conn.	1.00
M. F. Hope, New Haven, Conn.	2.00
James P. Wood, New Haven, Conn.	5.00
C. S. Ramsay, New Britain, Conn.	3.00
TOTAL	$99.00

The following contributions have been received through The Pharmaceutical Era Fund for the relief of the Halifax Druggists—Thos. A. Healey, Treasurer:

Previously acknowledged	$407.50
C. W. Whalen, Millinocket, Me.	1.00
Richard S. Kellar, Cananstota, N. Y.	1.50
James McIntosh, Colorado, City, Colo.	1.00
Elmer E. Larson, Roce Lake, Wis.	2.00
H. O. Speck, Bison, Kansas	2.50
The Averbeck Drug Co., Youngstown, Ohio	10.00
G. H. Nollen, Newton, Iowa	2.50
H. B. McConnochie's Waupun, Wis.	1.00
Champney's Pharmacy, Perrysburg, Ohio	5.00
Dr. W. E. Williams, Fayette, Mo.	1.00
L. A. Baugh, The Druggist, Garden City, Kansas	2.00
M. J. Lacer, Clyde, Ohio	1.00
Eugene A. Pfefferle, New Ulm, Minn.	2.00
C. W. West, Terre Haute, Ind.	2.00
L. V. Dickson, Dickson Drug Co., Portland, Oregon	1.00
Retail Druggists' Ass'n., San Francisco, Cal.	5.00
N. Schwartz, Sec'y.	
Bountiful Drug Store, Bountiful, Utah	2.00
Pabst Chemical Co., Chicago, Ill.	5.00
J. Wells Thompson, Adams, Mass.	2.00
M. C. Wolgamot, Richwood, Ohio	1.00
W. E. Young, City Drug Store, Three Forks, Mont.	5.00
S. J. Sternicki, Cleveland, Ohio	3.00
Mrs. E. G. Fernandez, City Price, La.	.25
John E. Longnecker, Struthers, Ohio	5.00
Ogden Wholesale Drug Co., Inc., Ogden, Utah	5.00
J. C. Reher, Chino, Cal.	5.00
A. G. Hulett, Phoenix, Ariz.	1.00
The Delta Drug Store, Hillsboro, Oregon	2.50
C. S. Furniss, Milford, Mich.	1.00
Fred P. Shanopell, Canton, Ohio	5.00
Criswell & Bristow, Ripley, Ohio	1.50
W. A. Crosby, Hamlontown, Iowa	1.00
G. B. Palm, Nixon, Texas	2.00
G. A. Mason, Cedar, Mich.	2.00
McQuiston Drug Co., Monticello, Ark.	5.00
Pearce Drug Co., Whigham, Ga.	1.00
H. B. Foresman, Renova, Pa.	.50
Dr. B. M. Porter, Melrose, N. Mex.	3.00
W. F. Meyer & Co., Seely, Texas	2.00
Geo. E. Graydon, Edmonton, Alberta	10.00
Simmons Drug Store, San Saba, Texas	1.00
M. D. Howlett, Eureka, Utah	10.00
E. A. Stunteheck, Newport, Ky.	1.00
A. L. McKay, Lemore, Cal.	10.00
Merck & Co., New York City	100.00
Brown Drug Co., Warsaw, N. C.	5.00
Kenton Drug Co., (W. M. Eddy) Kenton, Okla.	1.00
C. O. Roskota, Peoria, Ill.	$2.00
Juergens & Walker, Sutton, W. Va.	2.00
Rudolph G. Schneble, Dayton, Ohio	1.00
Irion Drug Co., Tyler, Texas	5.00
Selma Retail Drug Club., Selma, Ala.	10.00
L. A. Weissinger, Sec'y	
Furr & Hare, Swearington, Texas	1.10
The DeVilbiss Mfg. Co., Toledo, Ohio	50.00
A. H. Lewis, Alcester, S. D.	5.00
The Westhope Drug Co., Westhope, N. D.	5.00
Goodyear Drug Co., Lawson, Mo.	2.00
Brewer & Trickey, Charleston, Mo.	5.00
Mitchell's Pharmacy, Waterville, Wash.	2.00
Kirk Geary & Co., and Sacramento Druggists, Sacramento, Cal.	95.00
J. H. Linesch, St. Bernard, Ohio	5.00
Eau Gallie Phcy (S. K. Watts), Eau Gallie, Fla.	1.00
E. Edson, (City Drug Store) Lyndon, Wash.	10.00
Wm. C. Frailey, Lancaster, Pa.	2.00
Crawford's Drug Store, Mocksville, N. C.	2.00
Thompson Drug Co., Chatham, Va.	10.00
Treudt & McCormick, Granville, Ill.	2.00
John H. Young, M. D., Burkeville, Va.	1.00
Dr. Ernesto Sarra, Havana, Cuba	500.00
	$1,364.85

TO CO-OPERATE WITH FRENCH CHEMISTS

In the effort to establish an American branch of the French Societe de Chimie Industrielle a letter sent to French chemists explaining the purpose of the society, has been mailed to American chemists. It reads as follows:

"We have already in France, societies and publications dealing with pure chemistry, and others which concern themselves more especially with various industries involving chemical methods; some of them publish commercial records and others have for their object the furthering of special interests. It is not our intention to follow the footsteps of either.

"Our object is to form a group open to all.

"1. To aid the expansion of French chemical industry in all its branches.

"2. To call together all the industrial heads, professors, engineers, chemists, mechanical engineers, etc., who are interested in French chemical industry.

"3. To aid progress of chemical industry both from an economic and a scientific standpoint.

"Our means to accomplish these results are:

"1. Publication of a review, which we want to make as complete as possible.

"2. Organization of congress, conferences, lectures, expositions, etc.

"3. Establishment of an office for industrial chemistry and of a library, etc.

"We are convinced that your patriotism and a thorough understanding of your interests will readily lead you to join us. We should not await the revival of economic activity to organize for the success of our industry; we must commence immediately."

Dr. Jerome Alexander, chairman of the New York section of the Society of Chemical Industry, the corresponding British organization, has appointed the following committee to aid in forming the American branch:

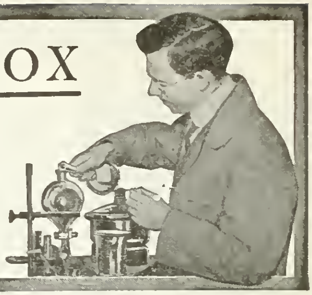
Dr. Alexander, Leo H. Baekeland, Raymond F. Bacon, Wilder D. Bancroft, Charles Baskerville, Albert Blum, Henri Blum, Marston T. Bogert, M. Ceresole, Arthur M. Comey, Charles A. Doremus, John V. N. Dorr, William M. Grosvenor, Frank Hemingway, Elwood Hendrick, Charles Herty, J. B. F. Herreshoff, George F. Kunz, Parker C. McIlhiney, William H. Nichols, R. E. Orfila, Charles L. Parsons, Charles L. Reese, Allan Rogers, Samuel P. Sadtler, Maximilian Toch, Gustave W. Thompson, G. E. Valabrique, E. P. V. Verge, Henri Viteaux and Christian B. Zabriskie.

THE QUESTION BOX

The "How to Do It" Department

CONDUCTED BY PHARMACEUTICAL EXPERTS

For the benefit of ERA Subscribers



How Long Will 5762 Capsules Last?

D. C. Keller, president of the Dow Drug Co., proprietors of the Dow-Weatherhead chain of drug stores in Cincinnati, Ohio, sends the following communication, which throws an interesting sidelight on one of the numerous incidents encountered in dispensing pharmacy:

"About a year ago we filled the following prescription soft paraffin, add the wool fat and coumarin, mix well.

Caffeine citrate	6 grains
Camphor monobromated	9 grains
Phenacetine	17 grains

Mix and make into 12 capsules.

Direct, one every 2 hours.

"Quite recently this prescription was presented at one of our stores to be refilled and we were directed to make 481 times the quantity, which made a package containing 5,762 capsules. The customer received and paid for it in the regular way, just as we would be paid for any 25c prescription.

"In conducting twenty retail stores we have never encountered so large a prescription as this one, and we believe it establishes a record. It was not intended for resale or for use in any manufacturing way. It suggests that some of your readers may desire to figure out the length of time it would require for our customer to swallow all of the capsules?"

Pyxol

(B. B. I.)—We cannot give the working formula for "pyxol" you name, and so far as we are able to ascertain, at least in its application as the name for a remedial substance, no proprietary claims are made for it. In searching reference literature on the subject, we find that Coblentz ("Newer Remedies," Boston, 1908), gives as synonymous terms the names "pyxol" and "pixol." Frequent references to the compound under this name are to be found in the pharmaceutical journals of the early nineties, most of them being of German origin. The 19th edition of the United States Dispensatory states that the preparation is a form of wood tar, soluble in water, and made by warming three parts of wood tar and one part of green soap together, then gradually adding three parts of a 10 per cent. solution of potassium hydroxide with stirring, a clear, dark brown syrup liquid resulting. According to the Dispensatory, the disinfecting power is said to be not less than that of a 5 per cent. solution of phenol. It has been recommended in the treatment of psoriasis and chancre, pencilled on in 10 to 15 per cent. solutions, 2 or 3 times daily.

Nail Cosmetic

(L. S. R.)—The *Chemist and Druggist*, London, states that the following cream will prevent the skin round the nails from becoming hard and ragged. The skin should be first softened by washing with warm water and soap, using a piece of pumice stone to smooth any rough bits, then the cream can be put on and a little cautiously worked with an orange-stick between the nail and the skin; white soft paraffin, 960 grains; anhydrous wool fat, 480 grains; spermaceti, 220 grains; white beeswax, 150 grains; coumarin, 5 grains. Melt the spermaceti and wax in the soft paraffin, add the wool fat and coumarin, mix well, and allow to cool without stirring.

A nail lubricant and polish, given by the same authority, is made as follows: Amber resin, 48 grains; oil of lavender, 4 drops; beeswax, 24 grains; linseed oil, 108 grains. Melt the spermaceti and wax in the linseed oil, add the oil of lavender, and allow to cool without stirring. Some of this rubbed into the nails preserves them from becoming rough and dry or cracky. It is said also that the lubricant improves the brightness of the nails if a polisher be employed an hour or two after the mixture has been applied.

Liquid Apiol in a Prescription

(J. S. R.)—How can I mass the substances given in the following prescription so they will stick together long enough to be rolled into pill form for introduction into the capsules as prescribed:

Apiol	1 dram
Ferrous sulphate	1 dram
Powdered aloes	½ dram
Powdered myrrh	½ dram

Mix and divide into 30 capsules.

However attempted, a large quantity of absorbent powder will be needed to make a satisfactory pill mass of the above substances, so much in fact that when the resulting mass is divided into 30 parts, each part would be far too large to appeal to the average patient. However, such a mass can be made by the use of compound tragacanth powder. It is suggested that a better method would be to mass the dry substances by themselves, dividing the mass into the required number of parts, placing the parts in the capsules and then dropping into each capsule the required amount of apiol (2 minims). We submit the prescription to Era readers for suggestions as to the most practicable method of compounding the substances ordered.

Liquor Kali Acetici

(J. W.)—Liquor Kali Acetici, according to German authorities, is a solution of potassium acetate (kaliumacetlosung) containing one-third of its weight of the dry salt. It is prepared by neutralizing 100 parts of acetic acid, sp. gr. 1.041, with 48 to 50 parts of potassium bicarbonate, expelling the carbon dioxide by heat, and diluting with distilled water to produce a liquid having a specific gravity of 1.176 to 1.180. It may also be prepared by dissolving 1 ounce of dried potassium acetate in twice its weight of distilled water. The Austrian Pharmacopoeia defines "Liquor Kali Acetici" as a solution containing 38 per cent. of potassium acetate and having a specific gravity of 1.200. Neither of these solutions should be confused with solution of potassium acetate used as a reagent in analytical work.

Scotch Paregoric

(B. E. D.)—We do not know the origin of the title "Scotch Paregoric," but it is given in the British Pharmaceutical Codex as a synonym for Tinctura Opii Ammoniata or ammoniated tincture of opium, B.P., which is made as follows: Tincture of opium, 15; benzoic acid, 2.06; oil of anise, 0.625; solution of ammonia, 20; alcohol, sufficient to produce, 100. Add the benzoic acid, and the oil of anise to 60 of alcohol, dissolve, add the tincture and the solution of ammonia, shake well, filter, and add sufficient of the alcohol to make up to the required volume. Ammoniated tincture of opium contains the soluble matter of about 0.62 grain of opium in 1 fl. dram. According to the Codex, this preparation is used generally with other expectorants to allay cough, and is a favorite sedative and hypnotic in heart disease. It is also stated to be a more powerful preparation than Tinctura Camphorae Composita, B.P. (paregoric), although its dose is the same, viz., 2 to 4 mils (½ to 1 fl. dram). It is not much used in American practice.

Haines' Test for Sugar in the Urine

(E. W. P.)—The following formula is that known under the above title: Take pure copper sulphate, 30 grains; distilled water, ½ ounce. Make a perfect solution and add glycerin, ½ ounce. Mix thoroughly and add 5 ounces of solution of potassa. In testing with the solution, take about 1 dram and gently boil it in an ordinary test tube. Next add from 6 to 8 drops, not more, of the suspected urine, and again gently boil. If sugar be present, a copious yellow or yellowish-red precipitate is thrown down; if no such precipitate appears, sugar is not present. This solution is claimed to be stable, and although it may be kept on hand indefinitely, it is said to be always in order for testing. The method is fully explained in most works on urinary analysis.

Filling for Dry Batteries

(G.S.)—In the so-called "dry batteries" the exciting agent is a paste instead of a fluid, moisture being necessary to generate the electric current. These compounds are generally of a secret character, so that a reason for the failure of a battery to work cannot be readily given without an examination by an expert. However, in the Gassner type of dry battery, which seems to be similar to that you describe, the apparatus consists of a containing vessel of zinc, which forms the positive element; the negative element is a cylinder of carbon, and the space between is filled with a paste, made as follows:

Zinc oxide	1 part
Sal ammoniac	1 part
Plaster	3 parts
Zinc chloride	1 part
Water	2 parts

The Burnley cell has a zinc cylinder lined with a plastic exciting mass of similar composition to that just described, viz.; sal ammoniac, 1 part; zinc chloride, 1 part; plaster of paris, 3 parts; flour, 1 part; water, 2 parts. In the center of the cell a carbon core is placed, the space between it and the exciting mass being filled with manganese dioxide, 3 parts; sal ammoniac, 1 part; zinc chloride, 1/10th part; powdered charcoal, 3½ parts, and water, sufficient. In this compound the manganese dioxide and the charcoal play the part of a depolarizing agent.

Another filling used for dry batteries, consists of charcoal, 3 ounces; graphite, 1 ounce; manganese dioxide, 3 ounces; arsenic acid, 1 ounce; calcium hydrate, 1 ounce; glucose mixed with dextrine or starch, 1 ounce. Mix intimately, and then work into a paste of proper consistency with a saturated solution of sodium and ammonium chlorides containing one-tenth of a mercury bichloride solution and an equal volume of hydrochloric acid. Add the fluid gradually and well work up the mass.

The fact that the zinc element has not been attacked, as your letter seems to imply, would indicate that the exciting agent either had lost its power to act or that the connections between one or the other of the poles were imperfect. It is probable that your local electrician can give you some practical advice on this subject; without knowing the type of battery the cause of your troubles can only be conjectured.

Carbon Remover For Engine Cylinders

(T. F. Co.)—The substances that have been recommended for removing carbon deposits from the engine cylinders of automobiles are acetone, denatured alcohol, wood alcohol, kerosene, and other compounds. One of the best remedies is said to be denatured alcohol, as it does not attack metals. A brand known as "pyro alcohol" has been particularly recommended for this purpose.

Denaturing Alcohol

(Subscriber)—"Is it safe to use externally denatured alcohol prepared according to the following formula? Grain alcohol, 90 parts; wood alcohol, 10 parts; benzene, ½ of 1 part."

We should say no, even could the pharmacist legally prepare such an alcohol, which under the present revenue regulations he cannot do. As explained in the January issue of the Era, page 20, druggists who hold permits to sell "medicated" alcohol, are required to use one of the ten formulas authorized by the revenue authorities. Denatured alcohol can only be prepared at denaturing plants licensed and under the supervision of the Government.

Vaseline Cold Cream

(M. B.)—A satisfactory formula for a preparation to be sold under the above title is the following taken from the British Pharmaceutical Codex:

Soft paraffin, white	1 ounce
White beeswax	1 ounce
Almond oil	4 fl. ounces
Rose water (undiluted)	2 fl. ounces
Oil of rose	4 minims
Rose water (undiluted)	2 fl. ounces

Melt the wax in the oil and dissolve the borax in the rose water by the aid of gentle heat. When both solutions are at about the same temperature, add the aqueous liquid gradually to the wax and oil, and stir until the mixture stiffens. Pour into a slightly warmed mortar containing the soft paraffin, mix, add the oil of rose, and stir until cold. This preparation is said to be especially suitable for toilet use. Similar formulas for vaseline cold cream, and formulas for honey and almond cream will be found in the Era Formulary, a copy of which you have. Consult the index.

Rock Candy versus U. S. P. Sugar

(Subscriber)—"Is pure rock candy as good as a vehicle as simple syrup in prescriptions and medicinal preparations? If not, why not?"

Experience tends to prove that rock candy or rock candy syrup offers no claims of superiority over sugar or simple syrup answering the pharmacopeial requirements for use as a vehicle. Any claim that rock candy may have had in the past as to superior purity, was largely based on the fact that in the crystallization of the sugar in the large monoclinic prisms characteristic of this form of sugar, it was possible to secure a higher degree of purity, for ordinary cane sugar, in the process of manufacture, often had small quantities of ultramarine blue added to cover up any trace of yellow color the finished product might have. This practice, however, is no longer followed at the present time, the Pharmacopoeia providing for its detection, so that there can be no valid excuse for the use of blued sugar in pharmaceutical operations. On the other hand, in years gone by, the adulteration of rock candy syrup with glucose has been asserted, but no evidence of this practice, if it ever existed, has been reported in recent years. Off-hand, then, we should say, rock candy syrup offers no advantages over the use of sugar or simple syrup for the purposes named, while in following the official formulas most pharmacists will prefer to employ the definite quantities of sugar or syrup directed for each preparation.

Liquid Surgical Soap

(E. W. P.)—We cannot give the formula for the proprietary preparation. However, most soaps of this character are solutions of soap in ether, a typical preparation being the "Liquor Saponis Aethereus" of the British Pharmaceutical Codex, which is made as follows:

Oleic acid	7 fl. ounces
Potassium hydroxide solution, saturated, a sufficient quantity.	
Alcohol	3 fl. ounces
Oil of lavender	20 minims
Methylated ether (s. g. 0.720), to	20 fl. ounces

Mix the oleic acid and alcohol and neutralize with the saturated solution of potassium hydroxide in water (1 in 1), of which nearly 1½ fl. ounces will be required, using phenolphthalein as indicator. Allow the neutralized product to cool, and add the oil and ether. The solution should be kept in well-stoppered bottles.

This soap is recommended to cleanse skin areas before surgical operations. A small quantity should be well rubbed in until the surface is dry, then, with a brush and hot water, thoroughly scrub the skin. The ether, being a fat solvent, penetrates the epidermis and carries the soap with it. It is stated that the detergent action of this solution may be increased by using a slight excess of potash.

Waterproofing Garments

(E. W. P.)—We are not familiar with the so-called "French" method of waterproofing army garments, nor do we know how closely it corresponds to the process described in one of our foreign exchanges some time ago, which was recommended for the rapid and extemporaneous treatment of military uniforms for the purpose of rendering them impermeable to water. It is as follows and may answer your purpose: Dissolve 500 grams of lanolin in the required amount of chloroform, mix with 4500 grams of gasoline and lightly impregnate the uniforms by immersing them in the mixture for a few minutes; express the excess liquid and dry in air.

A modification of this process consists in the use of a 5 or 10 per cent. solution of wool fat in any fat solvent, such as petrol, carbon tetrachloride, or benzene. If petrol or benzene is used it should contain half its volume of carbon tetrachloride or of dichlorethylene, in order to render it non-inflammable. The clothes are merely soaked in the solution, kneaded and moved about for a few minutes, then wrung out and hung up to dry in the open air. There is no need to remove buttons or facings. An aluminum salt process is to impregnate the material for twenty-four hours with 5° Bé aluminum acetate solution, diluted 1 to 40 with water, then dry in hot air, and draw through a 5 per cent. soap solution. A trace of undecomposed soap remains in the fabric, and this is removed by passing the soaped fabric through a solution of alum or aluminum acetate, rinsing, and drying. In using this process, the metal buttons should be removed.

Depilatory

(G. H.H.)—There is no preparation known as a depilatory that will permanently remove the hair from the face, and the application of all such compounds affords merely temporary relief from superfluous hair. Probably the only method of permanent removal is through the destruction of the hair bulb by means of the electric needle, an operation which should be attempted only by a dermatologist or physician skilled in such work. For external application, there are a number of type formulas extant, the active, ingredient in most of them being barium or sodium sulphide, their use being generally considered as not dangerous. The following formula represents one of the class:

Barium sulphide	50 parts
Starch	25 parts
Zinc oxide	25 parts

Mix with water so as to form a soft paste, and spread upon the face. In 10 minutes' time it is scraped off, when the skin will be found to be smooth.

Another formula, employing sodium sulphide, is the following, communicated to the Era some years ago by Dr. W. E. Dreyfus, a former chemist in the department of Public Charities, this city:

Sodium sulphide	25-35 parts
Glycerin	25 parts
Water, enough to make	100 parts
Oil of nutmegs, q. s. to perfume.	

Dr. Dreyfus recommended aromatic vinegar as one of the best applications for the skin following the use of a depilatory, in that it neutralized the caustic action of the base, besides possessing valuable antiseptic properties.

Starts Dyestuff Course

In accordance with the suggestion of Prof. Julius Stieglitz, of the University of Chicago, who is also chairman of the Committee on Synthetic Drugs of the National Research Council, and president last year of the American Chemical Society, that the university should shape its chemical course to bring about closer co-operation between scientists and business men, as was the practice in Germany, the University of Chicago is accepting industrial fellowships, the expenses of which are met by manufacturing concerns.

One of these industrial fellowships has already been started at the university for the scientific study of methods for producing the most delicate dyes. By permitting other nations to buy only the cheaper dyes, Germans expect to control manufacture of the finest colored silks, woolens and cottons for years after peace is declared. This plan would give them control of industries that would bring them hundreds of millions of dollars annually.

Prof. Stieglitz says:

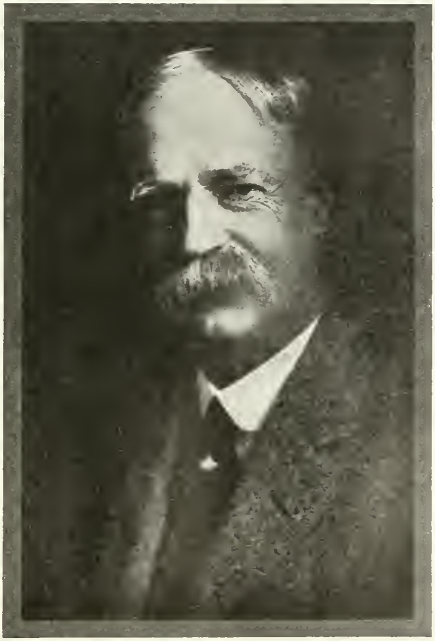
"What America needs is a declaration of chemical independence. We have been entirely dependent upon Germany for many chemicals used in medicine, surgery, and the industries. There is a rich field for scientific work and a number of universities are taking it up.

"Manufacture of dyestuffs in itself is not a big industry. It is probable that the amount expended annually for dyes is not more than $4,000,000. But we have been told by Germans that they will not sell their choicest dyes to us after the war. By keeping them in Germany they can control the manufacture of the finest colored dress fabrics and this involves hundreds of millions of dollars annually."

—DANIEL W. SULLIVAN, JR., of Concord, N. H., has been appointed a member of the New Hampshire Board of Pharmacy for three years, succeeding Herbert E. Rice, Nashua, term expired.

Professor Joseph Price Remington

PROF. JOSEPH PRICE REMINGTON, the most widely known pharmacist of his time, died at his home in Philadelphia on Jan. 1. Death was due to heart disease, from which he had suffered since last summer. His illness prevented him from attending the annual meeting of the American Pharmaceutical Association in Indianapolis in September last, but he was able to send the members of the organization a telegram expressing regrets at his inability to join them on that occasion. He gradually became weaker, the end coming on New Year's Day.



PROFESSOR JOSEPH PRICE REMINGTON

Prof. Remington was born in Philadelphia in 1847, his father being a practicing physician. After receiving his education in the Central High School of Philadelphia, he took up the study of pharmacy, serving his apprenticeship in the drug store of Charles Ellis & Co. At the same time, he attended the Philadelphia College of Pharmacy, graduating in 1866. After several years service with Dr. E. R. Squibb and Powers & Weightman, he became the proprietor of a pharmacy, which he conducted for a number of years. His ability was early recognized, and after serving as an assistant successively to Professors Parrish and Proctor, he was promoted, on the death of the latter in 1874, to the professorship in pharmacy. As a teacher in his special field, he developed an international reputation, while his "Practice of Pharmacy," which was first published in 1885, soon became the most widely used book of its kind in the English language. The book ran through six editions, the last one being published just a few weeks before his death.

His greatest work, perhaps, was that done in connection with the publication of the United States Pharmacopoeia, on the Revision Committee of which he had served since 1877, becoming on the death of the late Dr. Charles Rice in 1901, chairman of the committee which prepared the text of the eighth and ninth decennial revisions of that book. The Pharmacopoeia was made the standard for drugs by the Food and Drugs Act, passed by Congress in 1906, and its adoption as an official guide entailed much original research on the part of the Pharmacopoeia makers, a work for which Prof. Remington was pre-eminently qualified. He also served as pharmaceutical editor of the United States Dispensatory, beginning with the edition of 1879, and also in a similar capacity in the publication of Lippincott's Medical Dictionary. As a contributor to pharmaceutical literature, his published writings covered almost every phase of professional activity.

Prof. Remington was a member of many pharmaceutical and scientific organizations. He joined the American Pharmaceutical Association in 1874, and was elected president in 1892, presiding at the meeting held the following year in Chicago during the World's Columbian Exposition, serving also as president of the International Pharmaceutical Congress, which met in Chicago the same year, delegates being present from many European countries. He was a delegate representing the United States at the International Pharmaceutical Congress held in Brussels in 1896. He was also a delegate to the Pan-American Medical Congress in 1893, and to the Congress held in Mexico in 1896. He was a fellow of the Chemical, the Linnean, and the Royal Microscopical Societies of Great Britain, the American Chemical Society, the Academy of Natural Sciences, and an honorary member of twenty-eight foreign and American Pharmaceutical and medical bodies.

Personally, Prof. Remington was a forceful and fluent speaker, and was a recognized leader in debate. The funeral was held on Jan. 4 in Holy Trinity Episcopal Church of which he was a vestryman. He is survived by his widow, and three sons and two daughters, one of the sons, Rev. William P. Remington, being suffragan bishop of South Dakota and chaplain of the Mayo Hospital Unit, Fort McPherson, Ga. The other sons are Dr. A. H. Remington, of the Medical Reserve Corps, on duty at Fort Oglethorpe, Ga., and J. Percy Remington, a consulting engineer.

On Jan. 4, memorial services were held at the Philadelphia College of Pharmacy, the members expressing their deep sorrow at the death of Prof. Remington, who had so long been identified with the institution, a committee consisting of J. W. England, Samuel P. Sadtler, Charles H. LaWall, Julius W. Sturmer and Henry K. Mulford presenting resolutions which expressed the loss the college had sustained in the passing of its dean and also related incidents in his career as an educator. Prof. Remington was designated as the "students' friend" and his pupils were numbered by thousands. He was a teacher of teachers, and he was the first to visualize the importance and necessity of teaching commercial pharmacy and establish such a course in a college of pharmacy.

Besides references to other accomplishments in Prof. Remington's career, the resolutions, which were ordered spread on the minutes and a copy sent to the family, closed with the following tribute:

As a man, "we ne'er shall look upon his like again." "Genial, eloquent clean-hearted and clean-minded," possessed of unusual natural ability coupled with rare executive capacity, he served his day and generation, loyally and enthusiastically, and left a record of achievement that may well serve as an example to future generations.

Just a personal note: Professor Remington, was gifted with a charming personality. His courtesy, his tact, his ability to adapt himself to all types of people, made friends of all those he met, while his strong, clean intellect served to inspire them. The meaning of his departure from life may be expressed in the words of S. Weir Mitchell's beautiful poem, "Evening," in which is said:

"I know the night is now at hand,
The mists lie low on hill and bay,
The autumn sheaves are dewless, dry,
But I have had the day.
Yes, I have had, dear Lord, the day;
When at Thy call I have the night,
Brief be the twilight as I pass
From light to dark, from dark to light."

Obituary

DR. CHARLES T. GEORGE

Dr. Charles T. George, pioneer druggist of Harrisburg, Pa., and a member of the State Pharmaceutical Examining Board since 1891, most of which time he had served as secretary, died on Dec. 26. He was widely known by pharmacists throughout the country, thousands of young pharmacists during his long career having taken their state examinations from him, his signature adorning registration certificates exhibited through Pennsylvania and other States.

He was born in Homberge, Germany, in 1845, and came to America at the age of six. He secured his early education in the public schools of Harrisburg, opening a drug store at Fourth and Walnut streets, that city, after working as an apprentice at the trade. He was a life member of the A. Ph. A., joining the association in 1873. He was also a member of the Pennsylvania State Ph. A., and one of its early presidents; a member of the Philadelphia College of Pharmacy, an honorary member of the P. C. P. Alumni Association, and of the University of Western Pennsylvania. He was prominently identified with many fraternal organizations, including the Masonic order, the Shrine and the I. O. O. F. He was one of the organizers of the Bethlehem Lutheran Church, a member of its board of trustees for more than a quarter of a century, teaching the Bible class of the church for more than thirty years. He was also a member and president of the Board of School Directors, and president of the Explorers' Association. His drug store was known as one of the finest and best equipped of the pharmacies in the State. He is survived by one daughter, two grandchildren and two great-grandchildren.

LUCIUS M. MONROE

Lucius M. Monroe, druggist of New Canaan, Conn., died on Jan. 9, after a ten days' illness. He was 58 years of age, graduating from the New York College of Pharmacy at the age of 21. He soon formed a partnership with his father, who was a pioneer apothecary of New Canaan, succeeding to the business on the death of the father in 1916. He was president of the New Canaan Water Company, a director of the New Canaan Bank, and interested in many of the business activities of his locality. He was a member of the Connecticut Pharmaceutical Association.

MERTZ GRAVES

Mertz Graves, one of the first to enter military service from his section of the country, being attached to the pharmaceutical department of the medical corps, and formerly a druggist at Shreveport, La., died recently at Camp Jackson, S. C., from the effects of a severe cold followed by complications. He is survived by his widow and one child.

MAJOR HENRY S. CLARK

Major Henry Schieffelin Clark, treasurer of the wholesale drug house of Schieffelin & Co., New York, died at his home in the Bronx on Jan. 4. He was born in 1862, and early entered the concern established by his great-great-grandfather, Jacob Schieffelin, one hundred and twenty years ago. He was a member of the Army and Navy Club, of the St. Nicholas Society, Society of Colonial Wars and of the Colonial Order. When war was declared last April, he applied for and received an appointment in the Officers' Reserve Corps as major in the ordnance department. He is survived by his widow, and three sons, all in the service of the country, Henry S. Jr., a lieutenant in the navy; Frith D., 1st lieutenant in the 106th regiment, Spartanburg, and William L., a corporal in the Marine Corps.

RICHARD B. KNIGHT

Richard B. Knight, pioneer druggist and one of the best known business men of Portland, Ore., died recently, aged 69. He started in the drug business at Evans, Colo., in the early 70's.

OLIVER T. MAXWELL

Oliver T. Maxwell, president of the Maxwell Drug Co., wholesale druggists, Ft. Worth, Texas, died on Jan. 8, aged 59. He was at one time a member of the State Legislature and a former mayor of Cisco, Texas. He is survived by his widow, two sons, one of whom, Oliver, is secretary and treasurer of the Maxwell Drug Co., and five daughters.

DRUG ADDICTION NO CRIME

At the hearing of the joint legislative committee under Senator Whitney, which is inquiring into the drug evil, Judge Cornelius J. Collins, representing the consolidated committee of the State Magistrates' Association and the New York City committee on the drug evil, said that that body was in favor of "institutional custodial treatment whenever and wherever practicable, where medication can be administered under favorable circumstances during the drug withdrawal period and where suitable convalescing facilities can be afforded."

"We believe that wherever practicable this should be done in public and private institutions without the intervention of courts of criminal procedure, and that no person who is merely an addict and has not violated the law should be stigmatized as a criminal."

Charles Samson, secretary of the board of inebriety, who is in charge of the Warwick farm institution for reclaiming drunkards and drug addicts, declared that "addicts can be taken off the drug painlessly and without harm," which is in contradiction to much of the testimony of habitues. Richard H. Yance, narcotic inspector for the federal government, said that over the country at large, the drug evil had been reduced 50 per cent. in the last three years, and declared that the criminal doctor was the worst factor in the situation.

DRUGGISTS BANQUET S. C. HENRY

Members of the Philadelphia Association of Retail Druggists gave a dinner Jan. 4 at the Hotel Adelphia, to Samuel C. Henry, past president of the local association and of the national association, in honor of his recent election as secretary of the latter. O. W. Osterlund was toastmaster. The speakers were C. A. Mayo, of New York, editor of the American Druggist; Charles H. LaWall, president-elect of the American Pharmaceutical Association; E. G. Eberle, editor of the American Pharmaceutical Association Journal; W. H. Knoepfel, of Scranton, president of the State association, and W. D. Reynolds, president of the Philadelphia Association.

DRUG TRADE ROLL OF HONOR

The drug trade is proud of those who have left its ranks to fight the good fight for World Democracy. To them all honor is due, and the ERA is glad to print herewith their names, with information of their former connection with pharmacy, their rank and the branch of the Government Service in which they are now serving the country.

We invite the co-operation of every druggist and every firm supplying goods to the drug trade to make this Roll of Honor complete. Assist us to give proper recognition to the devoted sacrifice of these men of the drug trade by sending us the name of any drug clerk or proprietor, salesman or manufacturer you know now enrolled in any branch of the United States military or naval forces. Address Roll of Honor, **THE PHARMACEUTICAL ERA, 3 Park Place, New York City.**

HARRY L. BRUCE, Carter, Carter & Meigs, Boston, Mass., Corporal, 101st Field Artillery, U. S. A., somewhere in France.

M. F. FIELD, Adams Drug Co., New York City; Sergeant Quartermaster's Dept., U. S. R., Walter Reed Hospital, Washington, D. C.

ROLAND CORBETT, Vice President A. G. Corbett Drug Co., Clarion, Pa.; 1st Lieutenant, Field Hospital, No. 4, 28th Div. Camp Hancock, Augusta, Ga.

EDWARD C. GARVEY, Garvey's Pharmacy, Prairie du Chien, Wis.; Medical Officers Training Camp K5, Ft. Riley, Kans.

W. G. CROW, Mundt's Drug Store, Chelan, Wash.; Pharmacist's Mate, Yard Dispensary, Mare Island Navy Yard, Calif.

SANFORD B. WILSON, proprietor Modern Pharmacy, Payson, Utah; Medical Officers Training Corps 3 D. M., Fort Riley, Kans.

W. T. MOLLISON, W. T. Mollison & Co., Faribault, Minn.; Colonel Commanding 136th U. S. Inf.; Camp Cody, Deming, N. M.

AUGUST J. PASSIGLIA, Hospital Apprentice 1st Class, Yard Dispensary, Brooklyn Navy Yard, N. Y

JOEL VIRGIL McCOMB, McComb Drug Co., Cotton Plant, Ark.; Hospital Apprentice, Great Lakes Naval Station, Ill.

RALPH D. WRIGHT, R. G. Wright Pharmacy, Billerica, Mass.; Private Battery C, 101st U. S. Field Artillery, somewhere in France.

JOHN LESTER HUDSON, Smith & Given, Le Roy, N. Y.; Sergeant, Medical Corps, Base Hospital, Camp Morrison, Va.

JAMES N. BELL, Freemont Drug Co., Seattle, Wash., Private 571 Co., U. S. Ambulance Corps.

ROSS A. WEBB, Johnson City, Tenn.; Chief Pharmacist, Mountain Branch, Military Home, Tenn.

J. E. O'BRIEN, O'Brien's Pharmacy, Beaver Dam, Wis.; Hospital Steward, Medical Corps, U. S. Army, Walter Reed Hospital, Washington, D. C.

DANIEL W. ODELL, manager Glen Spring Pharmacy, Watkins, N. Y. Private Co. D, 502 Engineers, U. S. A., somewhere in France.

ALVIE BEYERS, Lange Drug Store, Richmond, Cal.; Sergeant, Co. F., 159th Inf., U. S. A.

ALBERT K. WALKER, Juergens & Walker, Sutton, W. Va.; Cadet, Aviation Corps, U. S. A.; School of Military Aeronautics, Atlanta, Ga.

R. O. ZEMAN, Zeman Pharmacy, Wilson, Kans.; Medical Officers Training Corps 4H, Fort Riley, Kans.

WILLIAM K. HYER, H. F. Burke Drug Co, Clarkesburg, W. Va., Private Hospital Corps, somewhere in France.

GEORGE F. LISTER, manager City Drug Store, Hillman, Mich.; 1st Lieutenant, 334th Inf., U. S. A., Camp Zachary Taylor, Ky.

EDWARD M. BAKER, Brown, Herold & Co., Sutton, W. Va.; Private, Hospital Corps, Camp Meade, Md.

E. B. WILLIAMS, Aukerna Drug Co., Hailey, Idaho; Pharmacists Mate, 2nd class, Medical Depot, Navy Yard, Philadelphia, Pa.

DAVID C. MOORE, Palmer Drug Co., Santa Cruz, Cal., Pharmacist, U. S. N., somewhere at sea.

GILBERT P. RUSE, Ruse & Shepard, Humboldt, Iowa; Corporal, Hospital Corps, U. S. A., Fort Riley, Kans.

FRED GRIEBEL, J. W. M. Eslaman Pharmacy, Staunton, Ill.; Lieutenant, Hospital Corps, U. S. A., somewhere in France.

EARL CLINTON SHUTTLEWORTH, proprietor Owl Drug Store, Jonesboro, Ind., Apprentice Seaman, Great Lakes Naval Training Station, Ill.

LLOYD E. J. SCHURDEVIN, Schurdevin Pharmacy, Whiting, Ind.; Private, Co. E, 7th Engineers, U. S. A., Ft. Leavenworth, Kans.

CLIFFORD H. M. FISCHER, G. A. Fischer, Jefferson City, Mo.; 2nd Lieutenant, Auxiliary Remount Depot, Camp Funston, Kans.

D. J. PATRICK, Usrey Pharmacy, Camden, Ark., Sergeant Sanitary Train, National Army, Camp Pike, Ark.

J. HAMPTON MORGAN, Morgan's Drug Store, Camden, Ark.; 1st Lieutenant, Co. M. 153 Inf., U. S. N. G., Camp Beauregard, La.

EUGENE T. CURRAN, G. O. Carter, Willimantic, Ct., Sergeant Medical Corps, U. S. A.; somewhere in France.

WILFORD A. GAGNON, G. O. Carter, Willimantic, Ct., Private Medical Corps, Camp Mills, Hempstead, N. Y.

REA S. LONGENECKER, Longenecker Drug Co., Struthers, Ohio; Sergeant, National Army, Camp Sherman, Chillicothe, Ohio.

J. J. COMOFORD, C. W. West Pharmacy, Terre Haute, Ind.; Private, Non-Commissioned Officers Training Corps, Ft. Oglethorpe, Ga.

WILLIAM H. PAGE, Driscoll Drug Co., Poughkeepsie, N. Y.; Private, 307 Field Artillery, Camp Dix, N. J.

ALLEN H. BOWIE, J. W. Bowie, Covington, Va.; Private, Hospital Corps, U. S A., Base Hospital, Richmond, Va.

R. N. VILLAREAL, Williams Pharmacy, Brownsville, Tex.; Private, Machine Gun Company, 360th Inf., National Army; Camp Travis, Texas.

H W. BELL, Williams Pharmacy, Brownsville, Tex.; 40th Co., 10 Batt., 156 Depot Brigade, Camp Travis, Tex.

RUSSELL M. MANNING, Clark & Cade, Indianapolis, Ind., Private 1st Class, Hospital Corps, U. S. A., 149 Field Hospital, 113 Sanitary Train, Camp Shelby, Miss..

EDWARD B. TRUITT, Truitt's Pharmacy, Norfolk, Va.; Corporal Machine Gun Co., 318 Inf, National Army, Camp Lee, Va.

L. E. McELTREE, W. P. Crossman, Toledo, Ohio, Sergeant, Hospital Corps, National Army, Camp Cody, N. M.

CLAUDE J. PYLES, Masters & Mitchell, Lebanon, Ind.; Private, Btty. A, 325th Field Artillery, National Army.

FRED W. WOODARD, Sandidge & Brayman, Mulberry, Okla., Sergeant, Btty. C, 130th Field Artillery, National Army, Camp Donephin, Ft. Sill, Okla.

JAMES BENSON, D. F. Corrigan, Fall River, Mass.; Hospital Attendant 1st Class, Naval Hospital, Newport, R. I.

The Dean of the State University of Iowa reports the following men formerly connected with the College of Pharmacy now in the Army or Navy with the note that with few exceptions these men are serving in the Hospital Corps:

J. L. KUBICEK, ex '12, California Masonic Hospital Corps.
H. W. PREUSS, '15, Hospital Corps.
E. D. BROWN, ex '14.
R. G. ODLE, '17, Camp Dodge, Des Moines, Iowa.
R. E. STEWART, '17, Camp Dodge, Des Moines, Iowa.
J. C. LIEK, '16, Fort Benjamin Harrison.
E. T. BJORNSTAD, '16, 1st Sergeant, Hospital Corps, Fort Logan.
W. R. JENNINGS, '16, Sergeant, 168th Infantry, France.
R. S. POTTER, ex '16, Camp Dodge, Des Moines, Iowa.
W. E. PALMER, '14, Navy Training Station, San Francisco, Cal.
C. C. POWERS, '14, Navy Training Station, San Francisco, Cal.
CHAS. CARTER, '17, Camp Lewis, American Lake, Washington.
D. T. STANTON, '17, Ambulance Corps, France.
V. H. TYLER, '16, Camp Dodge, Des Moines, Iowa.
R. E. HUMPHREY, '05, Captain.
E. L. BRIGHT, ex '17, Co. A Engineers, Camp Cody, Deming, New Mex.
I. V. COZINE, '97, Hospital Corps.
W. A. DODD, ex '15, Ambulance Corps, France.
B. B. HUNTER, '15.
P. K. HUSTON, '15, 1st Iowa Cavalry.
V. M. STEPHENSON, ex '16.
E. J. MEISTER, '17, Navy, Great Lakes Training Station.
M. F. KYHL, ex '15, Camp Dodge, Des Moines, Iowa.
W. R. BRYANT, '15, Hospital Corps, Camp Funston, Kansas.
T. H. GILLESPIE, ex '18, Jefferson Barracks.
R E. BARNES, ex '19, aviation (clerical department) Jefferson Barracks.

C. W. WILSEY, ex '18, 3rd Officer's Training Camp, Camp Dodge.

FRED JEAN, ex '19, Navy.

J. P. SWEENEY, ex '18, 3rd Officer's Training Camp, Camp Dodge.

H. J. TIERNEY, '17.

P. J. HANZLIK, '02, Medical Research for National Research Council.

J. M. LINDLY, '89, Member Henry County Council of National Defense.

S. M. HADNOTT, '10, Camp Dodge, Des Moines, Iowa.

I. W. FIELDS, '13, Camp Dodge, Des Moines, Iowa.

T. H. BEEKMAN, JR., '17, Fort Riley, Kansas.

Frederick Stearns & Co., the well known pharmaceutical house of Detroit, Mich., have the following men in the services:

ALAN O. STEARNS, son of the president F. K. Stearns, is 2nd Lieutenant, U. S. R., 310th Ammunition Train Co., Camp Custer, Battle Creek, Mich.

WM. H. LONGSTAFF, assistant advertising manager; 2nd Lieutenant, U. S. R., 160th Depot Brigade, Camp Custer, Mich.

EDWARD WINTER, Michigan salesman, Private Medical Corps, U. S. A.; somewhere in France.

GRAHAM LINDLEY, production department, Captain, U. S. R., somewhere in France.

HARVEY F. SMITH, main office staff, Lieutenant U. S. R., somewhere in France.

D. O. Haynes & Co. publishers *Drug Trade Weekly*, *The Soda Fountain*, and The Pharmaceutical Era, have the following men now in the Army and Navy:

D. O. HAYNES, JR., secretary and manager subscription department, 2nd Lieutenant, U. S. A., Heavy Artillery, at Officers Training School, Ft. Monroe, Va.

W. E. ROGERS, editorial department, 2nd Lieutenant, U. S. R., Intelligence Dept., address unknown.

HOWARD McDERMOTT, office staff, 1st Class Seaman, U. S. N., somewhere at sea.

The following is the Honor Roll of the Buffalo College Pharmacy.

S. GREGORY ALLEN, Phar. '16.

WALLACE R. AUSTIN, (Sgt.) Phar. '13, Camp Dix, Wrightstown, N. J.

ALFRED W. BARNETSON, Phar. '13, Spartanburg, South Carolina.

HOWARD G. BEHLING, Phar. '16, Camp Dix, Wrightstown, N. J.

CONRAD J. BESSING, Phar. '17.

SEYMOUR H. BLISS, Phar. '12, Spartanburg, South Carolina.

JOHN P. BOYLE, (Sgt.) Phar. '09, Somewhere in France.

PAUL C. BRAUNSCHWEIGER, Phar., '14.

WILLIAM H. BROSSWAY, Phar., Camp Dix, Wrightstown, N. J.

RAYMOND P. CHRISLER, Phar. Spartanburg, South Carolina.

ALBERT H. COLING, Phar. '12,

JAMES J. COURNEEN, Phar. '12, Fort Oglethorpe, Georgia.

JOHN L. DAVIS, Phar. '16.

CLARENCE DESING, Phar. '16, Camp Dix, Wrightstown, N. J.

WILLIAM C. DIEDRICH, Phar. '17.

BERNARD J. DOWD, (Sgt.) Phar., Camp Dix, Wrightstown, N. J.

CASIMIR DWORZANOWSKI, Phar. '18.

JOHN P. DWYER, Phar. '17, Camp Dix, Wrightstown, N. J.

RAYMOND J. FITZPATRICK, Phar., Newport, Rhode Island.

ARTHUR C. FLENTGE, A. C. '17.

STANLEY FORMANIAK, A. C. '17, Camp Dix, Wrightstown, N. J.

GEORGE H. FREEMAN, Phar., Buffalo Base Hospital.

WARREN H. S. GABRIEL, A. C. '14, Camp Dix, Wrightstown, N. J.

NICHOLAS J. GIANELLI, Phar. '16.

LOUIS H. GUARD, Phar. '11, Geneva, N. Y.

LEWIS E. HAMEL, Phar. '17, Pine Camp, Watertown, N. Y.

HARRY HAMPLE, Phar., U. S. S. Sachem, c/o N. Y. C. Postm'r.

HERMAN L. HARDY, Phar. '15, Plattsburg, N. Y.

RAYMOND C. HARRISON, Phar. '16, Camp Dix, Wrightstown, N. J.

HAROLD P. HAWKS, (Lieut.) Phar. '10, San Antonio, Texas.

WILLIS G. HICKMAN, (Lieut.) Instructor, San Antonio, Texas.

GEORGE R. HOLLAND, (Sgt.) Phar. '15, Somewhere in France.

CHARLES B. HOLTON, Phar. '16, Fort Oglethorpe, Georgia.

J. LESTER HUDSON, Phar. '15, Gettysburg, Pennsylvania.

RAYMOND M. HYDE, Phar., Spartanburg, South Carolina.

CLAUDE H. JACKSON, Phar. '13.

WYNN L. JACKSON, Phar. M. '17.

HUGH A. JUDD, Phar. '15.

THOMAS P. KERWICK, Phar. '18, Rochester Base Hospital.

CARL WILLIAM KIPHUTH, Phar. '15.

HERMAN E. KUGLIN, Phar. '17.

JOSEPH J. LOJACONO, Phar. '12, Camp Dix, Wrightstown, N. J.

WILLIAM E. LYTLE, Phar. '11, Somewhere in France.

HAROLD O. MADSEN, (Sgt.) Phar., Spartanburg, South Carolina.

PHILIP H. MAGNER, Phar. '17, Camp Meigs, Washington, D. C.

NEIL E. MORGAN, Phar. '14.

WILL WAYNE MORRIS, Phar. '13, Rochester Base Hospital.

EARL C. S. NABLO, Phar. '17, Spartanburg, South Carolina.

THOMAS M. NOLAN, Phar. '13, Rochester Base Hospital.

PATRICK H. O'MALLEY, Phar. '16, Camp Dix, Wrightstown, N. J.

HAROLD W. PENFIELD, Phar. '11, Somewhere in France.

THEODORE PICKERING, A. C.

ALEXANDER W. ROY, Phar. '14.

EMERY R. SMITH, Phar., Camp Dix, Wrightstown, N. J.

EVERETT B. STONE, Phar. '17, Spartanburg, South Carolina.

HAROLD J. STRASENBURGH, Phar. '13.

THOMAS W. SULLIVAN, Phar. '11, Camp Dix, Wrightstown, N. J.

M. CLAYTON THRUSH, (Surgeon) Phar. '01, Camp Dix, Wrightstown, N. J.

ABRAHAM J. TILEVITCH, Phar. '17, Camp Dix, Wrightstown, N. J.

WARD R. WARBOYS, Phar. '15, Spartanburg, South Carolina.

CHARLES F. WEED, Phar. '10, Spartanburg, South Carolina.

FRANK M. WHALEN, (Sgt) Phar., Spartanburg, South Carolina.

LLOYD P. WHITNEY, Phar. '17.

FREDERICK E. WILLIAMS, Phar. '16, Syracuse Base Hospital.

1. Please advise us of any names that should be added to this roll.
2. Please advise us of corrections that should be made in addresses.

The least those of us who stay at home can do is to honor those who go.

If you have a class-mate on this roll, mail him a letter. It will be appreciated.

Caution With Patriotism

Druggists, taken as a class are fully as patriotic as other merchants, but they also are probably more cautious than dealers in other commodities, owing to the disastrous results which may arise from mistakes in the dispensing of their wares. This undoubtedly accounts for the action taken by the members of the Retail Druggists Association of Fond Du Lac, Wis., at a meeting held to consider the curtailment of shopping hours pursuant to the request of the fuel administration to open business places not earlier than 8.30 o'clock in the morning and close at 5 o'clock in the evening.

After considerable discussion it was found that the drug stores, while willing to make sacrifices, would be unable to close as early as 5 o'clock in the evening. The decision was to wait and see how the plan works out and then figure out in some way to approximate the plan of the other stores which close in response to the new order. A good many of the drug stores maintain soda fountains. They would be unwilling to close early evenings if other stores serving ice cream were permitted to remain open. The same situation arose with respect to cigars. The druggists felt that it would be unfair for them to close at the early hour and permit their cigar trade to go to stores which are not complying with the order.

There is no question that the druggists of Fond Du Lac are anxious to do all in their power to assist the fuel administration in its work, but it is extremely doubtful if the administration exercised the best judgment possible in requesting druggists to close as early as 5 o'clock. Aside from business reasons it is quite easy to imagine genuine hardship resulting from such a wholesale closing of sources of supplies for sick rooms, to say nothing of emergencies. The druggists were wise to withhold their sanction of the plan until they had time to find out how it was going to work.

Credit and Commercial Case Decisions

By **GEORGE H. MURDOCH**, Newark, N. J.

Guarantor of Note.—A party, signing a note upon its back before delivery to the payee, is a guarantor.—165 P. (Cal.) 692.

Overdue Interest as Warning to Indorsee.—That interest on a note was overdue does not constitute notice of dishonor to an indorsee.—163 N. W. (Iowa) 247.

Third Person's Deals with Agent.—A third person dealing with an agent is bound at his peril to ascertain the fact of agency and extent of agent's authority.—195 S. W. (Tex.) 922.

Liability of Bailee.—An agent or bailee acting without compensation and solely for the accommodation of the principal or bailor is liable only for gross neglect.—92 S. E. (Va.) 837.

What Constitutes a "Depositor."—A "depositor" is one who delivers to or leaves with a bank money subject to his order, either upon time deposit or subject to check.—163 N. W. (Nebr.) 318.

Liability for Freight Charges.—Where a consignee refuses to pay transportation charges, an interstate carrier may look to the shipper, and is not required to sue the consignee.—241 F. (U. S.) 728.

Retroactive Statute.—A law should never be given a retroactive effect, except where its express language so indicates, but should, whenever reasonably possible, be given a prospective operation.—165 N. Y. S. 792.

Liability of Known Agent.—Where a person is known to be contracting as an agent of another, who is known to be the principal, such contract does not bind him personally, but binds the principal only.—116 N. E. (Ind.) 577.

Notes Payable at Bank.—That notes by their terms were made payable at the payee bank did not make such bank the collecting agent of a bank to which they were indorsed and transferred before maturity.—241 F. (U. S.) 631.

Resale by Seller on Buyer's Rejection.—Where goods are rejected by the buyer as not being up to sample, and they are resold by the seller, the buyer is not entitled to notice of the time and place of sale.—92 S. E. (Va.) 827.

Tender Not Necessary on Breached Sales Contract.—Where defendant buyers breached a sales contract by failing to give shipping instructions, plaintiff seller may recover damages for such breach without tendering the goods.—195 S. W. (Tex.) 900.

Construing Contract of Sale.—In construing a contract of sale, the whole agreement is to be considered, and not merely one clause of it, in the light of prevailing conditions and circumstances within parties' contemplation at the time of execution.—165 P. (Ore.) 579.

Collection of Collateral—Neglect.—The holder of collateral to secure another debt must exercise ordinary diligence to collect the collateral, and if he fails to do so, he will be responsible to his assignor for the damage sustained by reason of his default.—195 S. W. (Ky.) 813.

Wife's Power of Attorney.—When a man and wife live together, and he does business in her name under a general power of attorney, she must take the risk of his business ventures. She cannot repudiate a contract for the loan of money because it was used to pay on a certain grain option deal.—163 N. W. (N. D.) 264.

Wrongful Assumption of Authority.—A person who signed the name of another to a check, as agent of the latter, without authority to do so, was liable to the bank for the money he wrongfully procured from the check; his liability resting on his wrongful assumption of authority.—195 S. W. (Ark.) 678.

Bankruptcy of Partnership—Discharge.—Under the bankruptcy laws a partnership may be bankrupt and individuals composing it solvent, and before the individual members can be discharged in involuntary bankruptcy, acts of insolvency must have been charged and proven against them.—163 N. W. (Iowa) 224.

Misrepresentation as Ground for Avoidance.—Generally a misrepresentation as to what will be done in the future, or a statement of intention, will not warrant cancellation of a contract. Generally a mere expression of opinion, however erroneous, will not warrant cancellation of a contract. A misrepresentation may be with reference to the future, but so related to present conditions that its affirmation will be fraudulent.—165 P. (Mont.) 601.

False Pretenses.—To commit the crime of obtaining money under false pretenses, an actual defrauding must take place; but it is not necessary to constitute the crime that actual pecuniary loss be suffered, or that it will necessarily be suffered, but if the party defrauded has been placed, by the false pretenses of the accused, in such a position that he may eventually suffer loss, it is sufficient to support the charge.—195 S. W. (Ky.) 802.

"Appurtenances" Under Fire Insurance Policy.—Where a policy of fire insurance by a printed clause excepts liability for loss to patterns, unless specifically assumed, and the typewritten part of the policy states a risk on all appurtenances, apparatus, and supplies used in the insured's business, liability for a loss of patterns, which were models of castings to be formed for assembling printing presses in the usual course of insured's business, was "specifically assumed"; the patterns being "appurtenances."—165 N. Y. S. 567.

Deposits for Collection—Rights of Bank.—A corporation having a deposit in a bank which held its overdue notes for an amount exceeding the deposit, indorsed checks payable to it, and mailed them to the bank with the intent that they should be collected and credited to its account. Subsequently a receiver for the corporation was appointed, and still later the bank, with knowledge of the receivership received the checks, credited them to the corporation, subject to the right to charge them back if not paid, collected them, and credited the amount on the notes. **Held,** that as against the receivers the bank was entitled to the amount collected; the corporation having lost control of the checks before the receivership.—241 F. (U. S.) 715.

Breach of Duty by Agent.—Where the plaintiff and defendant, his salesman, had a joint contract of agency with the manufacturer of a certain article, giving them the exclusive agency, and defendant, according to his contract of employment, apprised the plaintiff that he was going to terminate the relation, the defendant's acts, between the time of such notice and the time of termination, in notifying customers of the plaintiff that he was about to terminate his relations with the plaintiff and engage in business for himself on the date stated, and that after that date he would be prepared to receive orders for such article in his own behalf, it not appearing that during that time he diverted any orders from plaintiff, was not a breach of his duty to his employer.—165 N. Y. S. 555.

Women in Pharmacy

CONDUCTED BY EMMA GARY WALLACE

RECENT WOMAN GRADUATE'S FINE RECORD

Among the recent graduates in pharmacy, Miss Amanda Clapham, of Philadelphia, has made a record which tends to emphasise that pharmacy is a vocation in which women can profitably engage. She comes from a family of pharmacists, her father, B. G. Clapham, being the proprietor of a pharmacy at Haines and Morton streets, Germantown, Philadelphia, while her uncle, H. C. Clapham, is also one of Philadelphia's best known druggists, his wife, Mrs. H. C. Clapham, being one of the workers and executive officers of the Philadelphia Chapter, W. O. N. A. R. D.

Miss Amanda Clapham

Miss Clapham graduated from the Philadelphia High School for Girls in 1914, receiving the Dodd gold medal for the highest average in the general course and a scholarship for the three years' course in the Philadelphia College of Pharmacy, entering the latter institution shortly thereafter. She immediately took high rank as a student, and was the only member of a class of 258 taking the Doctor in Pharmacy course to be awarded the rank of "distinguished." She received the prize of $25 in gold offered by Prof. Clement B. Lowe, for the best examination in materia medica and recognition of specimens, with a meritorious thesis. She also received the Instructors' prize of $20 for the highest term average in the third year graduating class, which was awarded by Prof. Stroup who suggested putting the prizes into a Liberty Bond, a suggestion which was accepted. She received honorable mention for her work in commercial pharmacy as also for the Kappa Psi Fraternity prize. These achievements constitute a record of which any pharmacy student might feel proud, and it speaks volumes for the thoroughness of Miss Clapham's work. For the present she expects to assist her father in the management of his pharmacy.

Around the Circuit

Mrs. Charles W. Stover, one of the ex-presidents of the B. A. R. D., and president of the Cantabrigia Club of Cambridge, Mass., recently shared in the 25th anniversary of the birth of that organization. The Lieutenant Governor of the state and the Mayor of the city were among the prominent people taking part. Mrs. Stover received the gift of a splendid flag on behalf of and for the Club.

Mrs. Samuel C. Henry has been appointed official legislative representative of the W. O. for the coming year.

Cincinnati Chapter No. 5 gave a November Five Hundred and Euchre Party at the home of Mrs. C. T. P. Fennel of Albion Place. The Chapter is sewing and knitting regularly for the Red Cross.

The newly elected officers of the Women's Pharmaceutical Association of the Pacific Coast are: President, Mrs. Kane; vice-presidents, Miss Dolcini and Miss Roehr; secretary, Mrs. Low; treasurer, Mrs. White; executive committee, Miss Fisher, Miss Laird, Miss Goodman, Miss Nelson and Mrs. Flint; advisory committee, Dr. Barbat Winslow, Mrs. Goodman, and Mrs. Sawyers.

Philadelphia Chapter No. 6, which holds a Children's Party during the holiday season, had an especially large gathering on Dec. 28th at two P. M. The older members were invited to come and bring as many of their friends as they wished, but the ticket of entrance was one little child. The children from a nearby Settlement House were the guests of the day and were generously remembered by Santa Claus. The Chapter made a gift of $10 to the Settlement House. Quite the belle of the Party was little Miss Jean Lee, grandchild of Mrs. Nellie Florence Lee, president of the Chapter.

Louisville Chapter No. 11 held their December meeting at the Y. W. C. A. The speaker was Mrs. Fulton Gordon, who spoke on war conditions. This Chapter is receiving most marked attention from the Kentucky Federation of Women's Clubs on account of the good work in many lines which they are doing. They held their Christmas Party for the children as usual. Santa Claus was on hand with a huge sack of popcorn snow balls. There was a well laden tree gay with electricity and bearing sweets for every little guest. These Christmas parties have a deeper meaning than would at first appear, for parents often come to know each other better through their children, than by any other means.

Chicago Chapter No. 2 gave a delightful Christmas Party at the Hotel LaSalle January 3rd. This was purposely set upon this date that parents who would otherwise have to stay at home on account of the busy season in the business might bring their children. A program of games, dancing, music and refreshments was arranged, Mrs. Didier, Mrs. Horace Nelson, Mrs. Isam Light, Mrs. Walgreen, Mrs. Klore and Mrs. Bernard being among those in charge of the day. The children did not receive gifts for themselves but each one brought a gift for a poor child and many of the parents gave a pound of something to help make up the Christmas baskets for the needy.

St. Louis Chapter No. 8 are busy with Red Cross work in the Women's Council Unit. They undertook Christmas charity work, giving $10 to the Y. M. C. A. War Fund, $5 to the St. Louis Providence Association, and $5 to the Tuberculosis Society, as well as individual work.

Mobile Chapter is busy with patriotic work under the leadership of their president, Mrs. J. M. Newton. They are also furnishing emergency kits for schools. A recent request for a cotton mill school was filled, and the outfit will bring comfort and security to those little children of busy workers.

Miss Seeley is now pharmacist at the Hebrew Hospital in Baltimore, taking the place of Miss Flora Blattstein, who has gone to Columbia University to pursue a special course of study in chemistry.

Schools and Colleges

NEW PROFESSOR OF MATERIA MEDICA

C. T. P. Fennel

Dr. Charles T P. Fennel, for many years professor of materia medica and chemistry in the Cincinnati College of Pharmacy, and State chemist of Ohio for fifteen years, receiving the appointment in 1895, has been appointed to the chair of materia medica in the University of Cincinnati, succeeding the late Dr. Julius Eichberg who held the position until his death about a year ago. Dr. Fennel is well-known to pharmacists and chemists throughout the country, being president of the Cincinnati Section of the American Chemical Society, and a member of the American Pharmaceutical Association and the American Association for the Advancement of Science. During the World's Fair in Chicago, he held an appointment in the scientific section. He has done a vast amount of analytical work, and has frequently served as a witness in prosecutions instituted by the State.

PHILADELPHIA

One of the stars on the service flag is a gold star in honor to the memory of the late Kenneth Hay, of Dubois, Penn., a recent student of the Pharmacy course, who gave his life in the fight for freedom "somewhere in France."

Over a hundred and fifty gift boxes were mailed to the students and recent graduates of the College who are fighting in either branch of service. Many boxes went to France and others to training camps all over the country. They were the gifts of the students attending college, the Faculty of the Institution and prominent Alumni.

Prof. Remington's entire scientific library has been bequeathed to Professor Charles H. LaWall and Professor E. Fullerton Cook, to be divided equally between them. For the present the library will be placed in the Pharmacy Department of the College as a reference library for the students in that department and will be catalogued as an adjunct library of the College.

Professor Robert P. Fischelis lectured before the local branch of the American Chemical Society during December, on "The latest developments in the Chlorine Antiseptics."

Prof. Heber W. Youngken also lectured before the Graduate Botanical Club of the University of Pennsylvania, on "The Pharmacognosy of Aloes," on Dec. 3, 1917.

Dr. George M. Beringer is confined to his home, having suffered a broken arch.

Professor LaWall, the President elect of the A. Ph. A. is Philadelphia's authority on "Foods." Quite an interesting article appeared in one of the leading morning papers recently where he was termed "the computer of calories" and "guardian of the granaries."

UNIVERSITY OF MICHIGAN

The Detroit Branch of the A. Ph. A. has accepted an invitation to join with the Prescott Club at Ann Arbor for their February meeting.

At the last meeting of the Prescott Club papers were read on the following subjects: "Patents," by Miss Irma Neuman; "Vitamines," by J. A. Wyman; "The Retail Drug Store," by H. B. McWilliams.

Prof. Henry Kraemer attended the annual meetings of the Botanical Society of America at Pittsburg, Pa., where he read a paper on "Some Experiments on the Modification of Color in Plants." Prof. Kraemer was also honored by being made Sub-editor of the Section of Pharmacognosy for the Botanical Abstracts Journal which is to be published by that Society.

During the last month the following students have gone into military service: V. G. Eaegle, Medical Corps; G. K. Finzel, Naval Auxiliary; Seth P. Grandy, Medical Corps; J. L. Powers, Motor Field Hospital No. 36, Camp Greenleaf, Fort Oglethorpe, Ga.

MEDICAL COLLEGE OF VIRGINIA

Four members of the Faculty of the Pharmacy School of the Medical College of Virginia, have received commissions and are now in the military service. Professor Albert Bolenbaugh, chairman of the School, has been commissioned First Lieutenant in the Sanitary Corps (Gas Defense Service), and is now stationed at Camp Lewis, Wash. (State). Professor Aubrey Straus, of the Department of Bacteriology, has the same commission in the Sanitary Corps and has been ordered to France, where he will do work in the laboratory of a base hospital. Mr. Leland Miller, for a number of years lecturer on Commercial Law, was in the officers' training camp at Fort Meyer, Va., and on being commissioned, was ordered to Fort Sam Houston, San Antonio, Texas. Dr. Fred P. Fletcher, Jr., lecturer on Physiology and First Aid, has been commissioned First Lieutenant in the Medical Reserve Corps and for the present is stationed in Richmond, taking training in the School of Roentgenology.

Dr. E. C. L. Miller, who was absent during the session 1916-17, has returned to work in the faculty and is teaching bacteriology and physiology.

The enrollment of students in the department has been materially reduced during the present session. More women, however, are taking up the work in pharmacy and the scarcity of drug clerks will probably direct more of them to this work.

The senior class has effected a permanent organization with the following officers: E. A. Brugh, president; T. W. Sale, vice-president; J. L. Edmonds, secretary-treasurer. The officers of the junior class are: L. S. Saunders, president; E. P. Roberts, vice-president; A. B. Shenk, secretary-treasurer.

THE UNIVERSITY OF MINNESOTA

So far, 668 students from the technical colleges of the University have enlisted in technical Reserve Corps. About forty per cent. of last year's enrollment in the College of Pharmacy are in service of one sort or another and of those in present attendance about one-third are drafted, but are continuing their college work until called.

At the meeting of the Board of Regents on January 18, it was voted to donate the digitalis which the College cultivated during the last season to the Government. Dean Wulling is in correspondence with Col. Darnell, U. S. Medical Corps, and it is probable that very soon the digitalis will be disposed of according to Government instructions.

The University of Minnesota Base Hospital, Unit No. 26, left the University soon after New Years Day and is now stationed at Fort McPherson, Georgia. Col. J. H. Ford, Medical Corps, U. S. A., in charge of the hospital unit writes from Fort McPherson: "I am convinced that the Unit will render excellent and devoted service. No effort will be spared to promote the welfare of the personnel and to render skillful, faithful service to all those who are entrusted to our care." Mr. Albert T. Gilbertson, '16, is head pharmacist of the Base Hospital.

The State Board of Pharmacy met at the College of Pharmacy to conduct its regular quarterly examinations during the week beginning January 21st.

The Theta Chapter of the Phi Delta Chi, the pharmacy fraternity, held their mid-winter smoker at the Fraternity House on Friday evening January 11th.

The University of Minnesota concludes this year a half-century of existence. On account of war conditions it has been decided that the celebration of this event should be a very quiet one. President Burton will be inaugurated at the same time. It is likely that the invitations to the affair will be confined to state officials and alumni. The program has not yet been worked out except that it is quite likely that the celebration will be sometime in May.

The first military promotion of a student was made January 8th when Pharmacist Lieutenant C. L. Flanders, '18, was promoted to the rank of Cadet Captain.

A University of Minnesota student soldier medal has been cast to be sent to student, faculty and alumni soldiers. The design was suggested by the Minnesota Alumni Weekly and has been worked out beautifully by Prof. S. C. Burton, Department of Architecture. The medal is about one and a half inches in diameter. The obverse side sets forth the occasion for the medal and indicates that it is from the University of Minnesota. The North Star further emphasizes its Minnesota origin. The eagle and the thirteen stars stand for the United States. This side also bears the name of the recipient and the date of the beginning of the war. The reverse side of the medal shows the Goddess of Liberty enlightening the world and President Wilson's words: "To make the world safe for democracy." This side also contains the words: "The American uniform, a symbol and guarantee of real manhood." At least 2,000 of these medals will have to be struck and it would not be surprising if in the end 2,500 or more were necessary. They are being paid for by popular University student subscription.

Dean Wulling was recently appointed member of the Public Safety Committee of the Minneapolis Civic and Commerce Association and of the Committee of Schools.

BUFFALO COLLEGE OF PHARMACY

Dean Willis G. Gregory and Dr. Albert P. Sy, Professor of Chemistry, spent Tuesday, January 15th in Syracuse when at the City Club the Central and Northern Alumni Association held its annual reunion and dinner. Fifty graduates sat down to a dinner which was neither heatless nor meatless. Addresses were made by Dean Gregory, Dean Squire, and Prof. Bissell of Buffalo. Prof. Flick of Syracuse University gave an interesting talk on his experiences while traveling in Russia. Dr. Bradshaw was toastmaster and Herbert G. Wright, Ph. G. '02 acted as president. Arrangements were made to sound out the graduates in Northern New York with a view to establishing another annual affair in Watertown. If this action is taken, the Syracuse men pledged themselves to send a delegation of a dozen to the northern city.

UNIVERSITY OF OKLAHOMA

The National Pharmaceutical Service Association now has 33 members in the School of Pharmacy. The entire senior class have shown their interest and appreciation of the benefits to be derived by the passage of the Edmonds Bill by joining this association and writing letters to their senators and representatives. Replies from these representatives in Congress indicate that the bill will have favorable consideration when it is put to a vote.

A great variety of seeds and bulbs of medicinal plants have arrived for the pharmaceutical garden which the school of pharmacy is preparing to start. The seeds are being sorted and classified to be ready to plant next spring, and the bulbs are being stored away in the cellar of the university greenhouse. They will not be allowed to sprout before April or May. Next summer much experience work will be made on the plants in the greenhouse and around it, but the medicinal shrubs will not be located in the permanent garden until next year.

That all freshmen and sophomores in the university will be required to take military training in order to graduate from the university was the ruling passed by the state board of education at its regular meeting in Oklahoma City during December.

The rule adopted was that beginning with the second semester, February 1, 1918, all first and second year men will be required to take a minimum of three hours military training a week.

Work on the new auditorium is progressing nicely. Concrete forms for the first floor and balcony have been filled and the forms for the second floor are now being built. Every attempt is being made to rush the work, but not being able to get materials, the contractors have about lost hope of finishing it for commencement next spring. The new building when finished is to have a capacity of 3,000 seats, and is to be made entirely of fireproof, re-inforced concrete.

The alumni directory will come off the press the first of February, according to Registrar Errett R. Newby, who has charge of the work. There has been some difficulty this year in obtaining the addresses of the graduates because of the large number of the men being in service, but a practically complete list has been secured and the final work of putting the copy in shape has been successfully handled. The names of the men who are serving their country will be printed in capitals so that they will stand out from the others, and both their home addresses and their military addresses so far as known will be given.

JOHN W. ALLEN DIES AFTER LONG ILLNESS

John W. Allen, president and founder of the corporation of J. W. Allen & Co., of Chicago, well known to druggists throughout the country as a manufacturer of ice cream freezers and ice crushers, died after a long illness of diabetes at his home in Oak Park, Ill., on Jan. 13. He was born in 1848 at Ann Arbor, Mich., and later went to Chicago where he founded the business of which he was the head. He was noted for his charity, truthfulness and integrity, and his life was an inspiration to all those with whom he came in contact. He was identified with many of the commercial activities of Chicago, and was a life member of the Masonic Order. He left an estate valued at more than $300,000 to his widow and son Harry W. Allen, the latter being the secretary of the company, who will succeed in the management of the business.

MUCH ANTITOXIN LOST

Large quantities of state-supplied antitoxin are lost through carelessness on the part of local health officers acting as distributing agents, O. C. Pierson, director of the division of records of the Minnesota State Board of Health, reported. Dr. H. M. Bracken, executive officer, was authorized to withdraw supplies from careless health officers and appoint druggists or town officers as distributing agents.

Mrs. A. Armour of the Armour Pharmacy, Pomona, San Francisco, has given up, for the time, the charge of her store to her son Harry Armour. In the meantime she is taking a rest and a trip East.

Professional & Trade Associations

CHICAGO BRANCH

About 30 members were in attendance at the 92nd monthly meeting of the Chicago Branch of the A. Ph. A., held at the Kuntz-Remmler restaurant on Dec. 21, the program starting with the appointment by President Craig of a committee to confer with a similar committee of the Chicago R. D. A. on making the branch meetings more attractive to retail pharmacists. Messrs. Eicher, Gray and Von Hermann were named as the committee. Dr. Bernard Fantus was appointed chairman of a committee to arrange and care for the proposed exhibit of U. S. P. and N.F. galenicals to be installed at the meeting of the American Medical Association to be held in Chicago in June.

Dr. Beal as chairman of the Special Committee on Compulsory Health Insurance stated that the final report of the committee would be ready for the next meeting. He discussed the extent and manner of the propaganda now being carried on in favor of such legislation, and of the secrecy maintained as to the real source of the movement.

General Secretary W. B. Day presented the leading subject of the evening, "National Pharmaceutical Service." He gave an abstract of the provisions of the Edmonds Bill and discussed them briefly. He referred to amendments that have been suggested. In his opinion, the provision requiring that candidates for the higher grades of officers must be graduates in pharmacy is very important. Upon it would depend the formation of a reserve corps in which the students in colleges of pharmacy might be enlisted and thereby enabled to complete their courses. In this bill, pharmacy is asking recognition on the same basis as that given to medicine, dentistry and veterinary science. But physicians, dentists and veterinarians must be graduates of their professional schools. If pharmacists now demand that they be accepted regardless of professional training, they would greatly weaken their position and endanger their prospects for recognition. Prof. Day called attention to the provision for promotion from the the lower to the higher ranks and strongly urged that all pharmacists make a united effort to secure the passage of the bill in substantially its present form.

The Edmonds Bill was further discussed by Thos. Potts, Harry Hood, E. Von Hermann, E. H. Wisner and others. The point especially dwelt upon was that pharmacists must get back of this bill with a united front and exert all ot their power. They must appear before the congressional committees having the bill in charge and tell them of the absolute need of trained pharmacists in the medical work of the army and why pharmacists are worthy of the recognition asked for. Unless those interested in the bill become very active and lay their cause fully before these committees, the bill will receive scant attention and fail of passage.

The following endorsement was unanimously approved:

> The Chicago Branch of the American Pharmaceutical Association strongly endorses all sections of the Edmonds Bill (H. R. No. 5531) a bill to increase the efficiency of the Medical Department of the United States Army, to provide a pharmaceutical corps in that department, and to improve the status and efficiency of the pharmacists in the Army, and further urges pharmacists to vigorous activity in behalf of the bill, especially calling upon their congressmen to work and vote in its favor.

The present status of the alcohol situation was discussed by S. C. Henry, President Craig and others. Mr. Henry said that no new rulings had been promulgated during the month but that enlightenment regarding a number of the previous rulings was still being sought. Mr. Craig stated that with the commandeering of wood alcohol by the government, the sale of medicated alcohol, which is permitted only to druggists, should be considerably increased. Professor Day questioned as to whether alcohol medicated with 1% phenol and somewhat diluted with water might not be used as a beverage.

An exhibit of adulterated crude drugs was made by Secretary Gathercoal including a number of drugs recently reported adulterated by the Department of Agriculture. Among the adulterated drugs shown were samples of stramonium, jalap, buchu, belladonna leaves, cantharides, senna, viburnum opulus, etc.

The subject of substitutes for glycerin and sugar in U.S.P. and N.F. galenicals was introduced by President Craig by a statement regarding the great lack of sugar in New York and the work of the druggists' sugar committee in that city.

Wm. Gray and I. A. Becker spoke on the use of sugar substitutes, especially invert sugar or corn sugar. Harry Hood dwelt upon the fact that druggists were already cutting down their sugar consumption to one-half of their former requirements.

Secretary Gathercoal mentioned the addendum to the British Pharmacopoeia, recently compiled and published, dealing with sugar and glycerin substitutes utilized by our English brethren. He stated that a copy had been ordered by mail and hoped it would be available for the next meeting.

Mr. Craig called for volunteers to undertake experimental work along these lines and to report at the next monthly meeting.

RHODE ISLAND PHARMACEUTICAL ASSOCIATION

At the 44th annual meeting of the Rhode Island Pharmaceutical Association held in Providence on Jan. 9, addresses were made by William H. Bagley of the local Internal Revenue office on "New Laws Affecting Retail Druggists," and Earl S. Clark on "Accounting for Retail Business Men." The following officers were elected: President, M. J. Corrigan, Providence; vice-president, C. A. Keller, Artic; treasurer, F. R. Keighley, Providence; secretary, D. E. Barrett, Providence; executive, Edward T. Colton, Providence, A. J. Johnson, Jr., Pawtucket, and J. P. McDonald, Providence.

ST. LOUIS PHARMACISTS IN CONFERENCE

St. Louis pharmacists held a mass meeting recently at the St. Louis College of Pharmacy for the purpose of discussing ways and means of furthering the interests of the Edmonds Bill (H.R. 5531) creating a pharmaceutical corps in the army. W. C. Bolm was chairman and M. J. Noll, secretary of the meeting which became a permanent organization, representing the Alumni Association of the St. Louis College of Pharmacy, the Cinchona Club, the R.D.A. of St. Louis, the St. Louis Branch of the A. Ph. A., the St. Louis Pharmaceutical Society and the St. Louis Drug Club. Special committees were appointed to enlist the interest of the St. Louis Chamber of Commerce, the St. Louis Red Cross, the St. Louis W.O.N.A.R.D., and the St. Louis drug trade in general. A telegram endorsing the Edmonds Bill was sent direct to President Woodrow Wilson. A petition being signed by the drug trade will be forwarded to Samuel L. Hilton, of Washington, chairman of the A. Ph. A. Committee on Status of Pharmacists in the U. S. employ. Arrangements are also being made to have special representatives appear before the committee which has the Edmonds Bill under consideration. Among the speakers were representatives L. C. Dyer and Joseph

Meeker, both heartily endorsing the bill. Professor Francis Hemm, Professor Leo Suppan, C. L. Chittenden, E. A. Sennewald, Carl F. G. Meyer, Dr. W. D. Hoelscher, O. J. Cloughly, J. F. Huesgen and Dr. H. M. Whelpley are among the many who are active in the propaganda. The central thought of all of the work is to ensure the soldiers as adequate pharmaceutical service as possible. The discussions dwelt upon the deplorable condition existing in many cantonments.

DRUGGISTS DISCUSS SUGAR SUBSTITUTES

The St. Paul Retail Druggists' Association at its annual meeting held recently, besides electing officers for the ensuing year, discussed various subjects of interest to the trade at the present time. The subject of sugar substitutes was presented by F. A. U. Smith, who believes that vast quantities of sugar, glycerin and alcohol may be saved by conservation measures during the war by providing substitutes that may be used in the making of tinctures, elixirs and spirits. He recommended the use of glucose in the place of sugar and glycerin, and proposed a return to the use of infusions to take the place of tinctures. He proposed a revision of the formulas of the U.S.P. and N.F., the substitute formulas presented by him being approved by the St. Paul druggists. Mr. Smith proposed that the subject be presented to the State Association for approval, which will probably be done.

The members of the association assured the State Board of Health of their co-operation in the effort that body is making to enforce the rules requiring the registration of venereal diseases, President Johnson offering to assist in the collection of the laws and regulations in force in other States relating to such diseases. Dr. C. E. Smith, assistant secretary of the State Board of Health will address the Minnesota Pharmaceutical Association on the new regulations at the meeting to be held at Minneapolis on Feb. 6 to 8. The registration will be begun with physicians shortly, to be followed later by similar work with pharmacists. The question of the druggists donating a Red Cross service car for war work was recommended to the attention of the State organization.

At the February meeting President Johnson will propose a reorganization of the local association to the extent of providing for an executive committeeman for each ward, each member to have charge of association activities in his district.

The following officers were elected: President, H. Martin Johnson; 1st vice-president, W. St. Clair; 2nd vice-president, W. H. Sears; secretary, M. A. Karras; treasurer, Charles E. Clough; executive committeeman, Chas. T. Heller.

DANVILLE, VA., DRUGGISTS MEET

At a recent meeting of the Danville (Va.) Drug Association, the subject of shorter hours for the druggists came up. One of the speakers presented comparison of labor hours between drug stores and those of merchants and railway hands, in which it was demonstrated that the druggist will work, excluding Sunday, on an average about 90 hours per week, as against 65 hours of the clerk and 48 of the railway man. The salaries of the drug clerk and the railway employe are about equal, with the advantage to the latter of shorter hours.

In addition, the druggist works on Sundays, in some cases all day, or according to the whim or desire of the owner of the store from six to eight hours. It was shown that for over twenty-five years these questions have been more or less presented to the community, but that little encouragement has been given generally by citizens for the relief of the druggist. These gentlemen are looked upon as men of cast iron constitutions, who can stand smilingly up to all requirements and demands made upon them during night hours.

In the consideration of these hardships sustained by them through these long hours the speaker said, the druggists of Danville ask for the moral support of good citizens, so they may enjoy civic benefits and social comforts and pleasures like other classes.

The question of shortening the hours of the druggist and his clerks is one for him to answer himself. The public will be obliged to follow his lead, and will do it cheerfully, once the custom is established. The one thing necessary is co-operation. One druggist in a community cannot accomplish it unless he is the only one. If shorter hours seem to be desirable and there is no doubt that the present working day should be modified, the thing to do is to get together, find out what is wanted, work out a schedule, and put it into effect at once. The thing will be done without fuss or feathers, and the public will be the first to congratulate.

The Milwaukee Pharmaceutical Association held its annual meeting on Jan. 17 and elected the following officers: President, J. J. Possehl; vice-president, Otto Hackendahl; secretary, William F. Kaiser; treasurer, Louis H. Kressin. In order to conserve the fuel supply, the association adopted an early closing resolution.

The Syracuse (N. Y.) Druggists' Association recently elected the following officers: President, T. Bruce Furnival; vice-president, W. J. Smith; treasurer, Louis E. Ireland; secretary, Frank A. Lawyer.

The National Drug Trade Conference at its annual meeting held in Baltimore on Jan. 4 and 5 elected the following officers for the ensuing year: President, James H. Beal, Urbana, Ill.; 1st vice-president, Samuel C. Henry, Chicago; 2nd vice-president, Dr. W. C. Abbott, Chicago; 3rd vice-president, C. Mahlon Kline, Philadelphia; secretary-treasurer, Charles M. Woodruff, Detroit. The workings of the Harrison Narcotic Act and the question of forming a central war board to act for all of the constituent organizations were discussed, but no definite action was taken.

W. O. N. A. R. D. ACTIVITIES

The engagement of Miss Hester C. Davis, daughter of Mr. and Mrs. Charles H. Davis of Dorchester, Mass., to Lieut. Charles B. Officer of Claremont, N. H., has been recently announced. Miss Davis's brother Cutter, a young man of twenty-one and a student in the M. I. T. has recently passed his examination for the Aviation section and is a Lieutenant. Mr. Davis, Sr., has always been prominent in Boston Association work, being the present Secretary, and Mrs. Davis was one of the earnest workers in the W. O. N. A. R. D.

Mrs. Otto Katz, President of the Queen City Chapter No. 5, has been confined to her home for sometime with a painful attack of rheumatism.

A delightful Christmas Dance was given by the Lambda Kappa Sigma Sorority of the Massachusetts College of Pharmacy Dec. 20 at the Crawford House. Miss Bertha Sugden, president, Miss Hazel Zigl, vice-president, Miss Ruth Davis, secretary, and Miss Milfred Gilmore treasurer, constituted the committee in charge.

Cleveland Chapter No. 21 sent Christmas boxes to the sixty young men of the Cleveland drug trade who are in training for national service. The Entertainment Committee of the Chapter consists of Mrs. Albrecht, Mrs. Lesser, Mrs. Hechler and Mrs. Spieth. They are planning a dance February 6, when they will entertain the Northern Ohio Drug Association.

New Books for Pharmacists

PRINCIPLES OF PHARMACY. By Henry V. Arny, Ph. G., Ph. D., F. C. S., professor of chemistry in the College of Pharmacy of Columbia University; sometime dean and professor of pharmacy in the School of Pharmacy of Western Reserve University; member of the Committee of Revision of the United States Pharmacopoeia, Ninth Revision, etc., 2nd ed. 8 vo., 1056 pages, cloth, $5.50 net. Philadelphia, W. B. Saunders Company.

The new edition of Arny's "Principles" will compare favorably with any of the standard works extant on practical pharmacy, this volume being a revision to bring the text to conform to the new Pharmacopoeia and National Formulary. In preparing this work the author makes plain the indebtedness of pharmacy to the allied sciences, and in explaining the points he would make he does not hesitate to make use of the principles enunciated in such sciences. As he stated in his first edition, "the frank intention of this book is to explain the pharmacopoeia from its pharmaceutical standpoint, and if that standard says that a certain chemical is a 'dextrogyrate ketone,' he believes that the average student should be able to learn what such terms mean without having to search through a dozen books." The principle thus enunciated has been consistently followed throughout the book, and wherever chemical theory or botanical relationship are discussed, they are always considered from the viewpoint of the pharmacist, a most practicable method for students and pharmacists whose scientific studies have been either neglected or need to be refreshed for a full understanding of the work in hand. A new feature of the book is the insertion at the end of each chapter of bibliographical references to which the student desiring more extended information can turn.

The book consists of seven parts: Part I deals with pharmaceutical processes, a striking feature being the discussion of the arithmetic of pharmacy. Part II deals with the galenical preparations of the pharmacopoeia and unofficials worthy of notice, all as a rule being grouped around a typical pharmacopoeial recipe. Part III deals with inorganic chemicals used in pharmacy, an introductory chapter on chemical theories and a discussion of chemical arithmetic being first presented. Part IV discusses the organic chemicals used in pharmacy according to the most modern classification, while Part V is devoted to chemical testing and a summary of the analytical methods of the Pharmacopoeia. Part VI takes up prescription work, and Part VII, laboratory exercises, a feature of the latter being the application of equation writing and chemical arithmetic to the work in hand. We are very sure this volume will meet all of the demands of pharmacists and students. It is written with great clearness, is practical, and presents in concise form all of the important facts relating to the identity, constituents, medical properties, pharmacy, etc., of the official substances of the Pharmacopoeia and National Formulary, besides much related information of great value.

BALDNESS, ITS CAUSES, ITS TREATMENT AND ITS PREVENTION. By Richard W. Muller, M. D., A. M. A., Ac. Med. 12 mo., 178 pages, cloth, $2. New York, E. P. Dutton & Co.

The author of this book, who has been for years a specialist on troubles of the hair and scalp, believes that not enough attention is given to the hair, either by the majority of the people or by the medical profession, and for this reason he undertakes to show how a moderate amount of preventive care will do away with most hair troubles. In presenting his subject, he first explains the anatomy of the hair and describes the principal diseases, accidents, and physical defects which cause loss or prevent growth of the hair, outlining a course of treatment for each case. Thus, he takes up in logical order the scalp and the hair; loss of hair; baldness (alopecia); diseases causing baldness; prematurely gray hair; hygiene, general therapy, examination of the scalp, technique of the examination of hair and scales; the microscopic examination of the marrow-canal for diagnostic purposes, treatment for hair loss in general, closing with an outline of therapy and formulas for the use of practitioners only.

One cannot read this book without becoming aware that the author knows his subject, and what he says is sure to be appreciated by practitioners, as well as by the general reader who may be interested in this direction. The book is written in simple, non-technical language, fully illustrated and provided with typical recipes, directions and suggestions for the various diseases described. The chapter on hygiene of the hair is most informative and should be read by every one.

YEAR-BOOK OF PHARMACY, comprising abstracts of papers relating to pharmacy, materia medica, and chemistry contributed to British and foreign journals from July 1, 1916 to June 30, 1917, with the transactions of the British Pharmaceutical Conference at the 54th annual meeting held in London, July 11, 1917. 12 mo., 438 pages, cloth. London, J. & A. Churchill.

This volume, prepared primarily for members of the British Pharmaceutical Conference, follows very closely the style made familiar to American readers by the Year Book of the American Pharmaceutical Association, presenting, as the latter does, abstracts of scientific papers of general interest to pharmacists, published throughout the world. These include an account of current work on chemistry, essential oils, materia medica, galenical pharmacy, dispensing notes, new remedies, new apparatus, new formulas and new processes. All of this information is put in handy reference form, and is of just the character to be most serviceable to the man behind the dispensing counter. As might be expected, but little material originating in Germany appears in the titles abstracted, but American journals are represented in the Year Book to an extent not employed in the volumes of previous years. As a frontispiece, the volume carries a portrait of Chas. Alex. Hill, B.Sc., F.I.C., president of the Conference for 1917-18, his presidential address on "Our Medicine Supply in War Time," appearing in full in the section of the book devoted to the proceedings of the Conference.

A COMPEND ON BACTERIOLOGY INCLUDING PATHOGENIC PROTOZOA By Robert L. Pittfield, M. D., pathologist to the Germantown Hospital; late demonstrator of bacteriology at the Medico Chirurgical College, Philadelphia, etc., etc. Third edition, with 4 plates and 82 other illustrations. 12 mo., 279 pages, cloth, $1.25 net. Philadelphia, P. Blakiston's Son & Co.

This little book designed by the author to serve the needs of the medical student preparing for examination, as also for the use of the general practitioner of medicine who desires to acquaint himself with the principal facts of the rapidly growing science of bacteriology, has met with deserved success, as shown by the rapid exhaustion of the first and second editions to meet the demand of students and others. Of course, this book does not pretend to be fully descriptive as to details of cultures and technic, but it does give the generally accepted facts relating to bacteriology, the following chapter headings indicating the scope of the work: Classification, morphology, and biology of bacteria; products of bacterial energy; infection; immunity; study of bacteria; bacteriological laboratory technic; antiseptics and disinfectants; bacteria; animal parasites; the filterable viruses; bacteriology of water, soil, air and milk. All of the information is given in a thorough and concise manner, and the pharmacist will find in the book most if not all of the facts he needs in preparing himself for a board of pharmacy examination.

ESSENTIALS OF PRESCRIPTION WRITING. By Cary Eggleston, M. D., instructor in pharmacology, Cornell University Medical College, New York City. 2nd ed., 4 x 6½ inches, 134 pages, cloth, $1.25. Philadelphia, W. B. Saunders Co.

The new edition of this handy manual shows a very thorough revision of the chapters on Latin grammar and the grammatic construction of prescriptions, and an amplification of the chapter on vehicles. Much new material has been added on the subject of coloring agents, the aim being to give the student a more definite idea of the amounts of the several agents required for the production of certain shades and tints, the amounts of coloring agent stated to give a definite color being those required for a 60 cc. (2 ounce) prescription, the name of the color referring to the plate of typical colors given in the 1903 edition of Funk & Wagnalls' Standard Dictionary. The coloring agents selected are those named in the National Formulary, and compound tincture of lavender and tincture of hydrastis.

Other features noted are the special points to be observed in writing prescriptions calling for narcotics as required by the Harrison Act; the chapter on suggestions for prescribing official preparations, and a list of twenty-five "practice prescriptions," for the use of students. The principles underlying the art of prescribing, especially when set forth in the clear manner obtaining in this volume, seem so easy that it is difficult to understand why so many physicians show up so poorly in writing prescriptions. If prescribers understood the art as they should, it is certain the pharmacist would have fewer compounding problems to solve.

ANNUAL REPORT OF THE SURGEON GENERAL OF THE PUBLIC HEALTH SERVICE OF THE UNITED STATES. For the fiscal year 1917. 8 vo., 387 pages, cl. Washington, Government Printing Office.

This is the 46th annual report of the Public Health Service, covering the one hundred and nineteenth year of its existence, the field work of the bureau being conducted through the divisions of scientific research, foreign and insular (maritime) quarantine and immigration; domestic (interstate) quarantine, sanitary reports and statistics, marine hospitals and relief, personnel and accounts, and miscellaneous. It is noted that at the beginning of the fiscal year there were on duty in the Service 50 pharmacists, divided as follows: Pharmacists of the first class, 28; second class, 16; third class, 6. One pharmacist of the second class resigned, and one pharmacist of the third class was appointed. Two pharmacists of the second class and 2 of the third class were promoted, leaving at the close of the fiscal year 50 pharmacists on duty as follows: First class, 30; second class, 16; third class, 5. During the year the Service has been kept busy in its effort to assist the other departments of the Government in their measures of defense following the declaration of war, especially in furnishing experts to solve problems relating to sanitation and public health. Not the least interesting section of the report is that part relating to the division of pharmacology, which shows the various activities of the Service which are of direct interest to the pharmacist who tries to follow the advances in scientific investigation relating to modern medicine.

THIRTY-SIXTH ANNUAL REPORT OF THE STATE DEPARTMENT OF HEALTH OF NEW YORK for the year ending December 31, 1915. In 3 volumes, 8 vo., Albany, J. B. Lyon Company.

This report covers very fully the activities of the State department of health for the year 1915, which Commissioner Hermann M. Biggs, in his letter of transmissal to the Governor claims holds several records in the history of the State in the reduction of deaths and death rates, the number of deaths reported from the six most important communicable diseases being the smallest of any year for a period extending as far back as the comparison can be made. The second volume contains a report of the work of the engineering division of the Department, and volume three contains reports of studies that have been made by members of the administrative, laboratory and field staff on the work immediately under their supervision. One of the most interesting articles is that by E. Sherman Case, assistant engineer, on "Emergency Chlorine Sterilization Plant for Public Water Supplies." According to Mr. Case, the first liquid chlorine was put on the market for commercial purposes in Germany in 1888, but its manufacture in the United States was not begun until 1909. The first practical application of liquid chlorine to a public water supply was in connection with the plant of the Western New York Water Company at Niagara Falls in November, 1912. At the present time the use of liquid chlorine is replacing that of bleaching powder for water disinfection, the method being employed in many large cities of the country, and more than forty municipalities in New York State. The engineer states that although the application of liquid chlorine is not a panacea for all water ills, it furnishes a very economical and practical method of disinfecting water supplies for potable purposes, and to a large extent is superseding all other methods. With liquid chlorine at 15 to 20 cents per pound, the cost of this method of treatment will range approximately from 50 cents to $1 per million gallons of water treated.

WHY THE BENZOATES ARE SCARCE

All benzoates have assumed a position of prominence during the past three weeks. Prices have mounted rapidly to new levels, quotations being just about double the figures ruling before the Christmas holidays. Benzoic acid is extremely hard to obtain at any price. Reports from the trade say that sales have been made all the way from $5.00 to $6.00 per pound for the U. S. P. All salts of the acid have advanced correspondingly, benzoate of soda U. S. P. being quoted nominally at $5.00 to about $5.50 per pound.

Benzoic acid, from which all benzoates are manufactured, is secured from two sources, gum benzoin by sublimation and from toluol. Of late, there has been practically no natural acid, made from the gum, on the market. Offerings have been confined to the so-called artificial product made from toluol. The Government has commandeered all available supplies of toluol for use in the manufacture of T. N. T. (trinitrotoluol) and other explosives, much in demand at the present time. This has practically cut off the makers of benzoic acid from their source of raw material and has left the trade with very small stocks on hand. The resultant demand has driven the price skyward and, from all indications, present conditions point to a continued upward trend in price until something is done to relieve the situation.

November 1, 1917, benzoic acid, U. S. P. was offered at $2.00 per pound. About this time the Government order regarding toluol was issued. Manufacturers were fairly well stocked and have been using up these supplies during the past two months. Their toluol on hand is now nearly exhausted. In response to an expected shortage, the price of benzoates has been advancing steadily since the beginning of November. By December 1st, last, the price had reached $3.00 per pound. It remained at this figure throughout the quiet holiday period, again advancing on January 2nd to $3.25. One week later quotations were made at $4.25 and today $5.00 to $6.00 is asked. This represents an advance of about $2.25 per pound in less than two weeks. Higher prices are predicted in the near future.

Boards of Pharmacy

NEW HAMPSHIRE

Members of the New Hampshire Board of Pharmacy are Albert S. Wetherell, Exeter; James L. Dow, Lancaster, and Daniel W. Sullivan, Jr., Concord. James L. Dow is secretary.

NEW JERSEY

The New Jersey Board of Pharmacy has granted certificates of registration to the following applicants who successfully passed the recent examination held at Trenton; Registered Pharmacists: Adam R. Anderson, Somerville; Moses Bauer, Newark; Frederick P. Bedle, Highlands; Russell L. Bush, Paterson; Humbert Carbone, Newark; Abraham Davidson, Philadelphia; Saul Elkes, Newark; George W. Felino, Brooklyn, N. Y.; Ivan R. Fuss, Roselle Park; Saul Goldfarb, Bronx, N. Y.; Henry R. Jordan, Jersey City; Edward Kent, Trenton; Hugo Krause, Camp Dix; Saul McClosky, Elm Park; William Peterfruend, New York, N. Y.; William M. Reilly, Jersey City; Edward J. Riedinger, Newark; Louis C. Schmidt, Hoboken; Harry Seiden, New York; Joseph Springer, Newark, Barnett Steinsnyder, Vineland; Jack L. Tilley, Newark; Alfred J. Van Voorhis, Highland Falls, N. Y.; Hyman Zahn, New York City.

Registered Assistants: Arthur H. M. Ahrens, Irvington; Edward Arky, New Brunswick; Robert A. Banscher, Camden; Frank J. Gilg, Paterson; Charles Levinson, Trenton; Gustav Paskow, Newark; Louis P. Schubert, Chrome; Irving Weiss, Newark.

The officers of the board are: President, George M. Beringer, Jr., Camden; vice-president, Ferdinand A. Bongartz, Jersey City; treasurer, William H. McNeill, Passaic; secretary, Edgar R. Sparks, Burlington.

KANSAS

Edward Dorsey, secretary, announces the following list of candidates who were successful at the examination held by the Kansas Board of Pharmacy at Clay Center on Nov. 14 and 15; Mrs. Fred C. Barber, Glasco; Miss Rose Berberich, Wichita; H. K. Campbell, Council Grove; Walter C. Fesler, Arkansas City; Harvey L. Long, Arkansas City; Chas. Morton, Nashville; R. H. Musson, Elk City; Will W. Neill, Peabody; H. R. Pursell, Almena; A. D. Roberts, Kansas City; W. A. Redoul, Waterville; Ray Scrugham, Wichita; G. F. Shirley, Syracuse; Earl F. Vaughn, Topeka; and John C. Wheeler, Oxford.

The next examination will be held at Wichita on Feb. 13 and 14.

LOUISIANA

Following the recent quarterly examination of the Louisiana Board of Pharmacy held at New Orleans, it was stated that the scarcity of drug clerks in the State caused by needs of the army and navy is being offset by entry of women into the calling. The following successful candidates were awarded certificates:

Registered Pharmacists: J. G. Harz, H. Capdau, Lulu De Beta, Frank Giarratana, William H. Bland, Matt Huber, Elliott Jacobs, John W. Kelly, Walter M. Schaff, John D. Morvant, Louis R. Menendes, of New Orleans and Clarence B. Forshag, of Amite, La.

Qualified Assistants: Loretta V. Flash, Neal S. Toups, Charles D. Smith, of New Orleans and Dennis B. Mann, Rayville, La.

Reciprocal Certificates of Registration: John Franklin Allen, of Alto. Tex., registered in Texas; J. T. Gibson, of De Ridder, La., registered in Tennessee; J. F. Tandy, of Shreveport, La., registered in Tennessee, and G. Turner Haines, Omaha, Neb., registered in Nebraska.

The board also passed favorably upon the application of the apprentices: Clarence J. Newell, Bogalusa, La.; Mrs. P. B. Manouver, Jennings; T. A. Lae, New Orleans; A. J. Rivers, New Orleans; Emile J. Menetre, Covington; James D. Collins, Glenmore; G. T. Field, Kentwood; John Alvin Schmitt, New Orleans; H. J. Grady, New Orleans; W. W. Chapmann, Shreveport; Raymond Curren, New Orleans; Gabriel O. Gatreaux, Thibodaux; Arista Begneud, Lafayette.

The examining committee of the board is composed of Vic Masson, chairman, materia medica; John E. Guess, pharmacy; E. E. Ewing, chemistry and A. Di Trapani, practical pharmacy. The committee will hold its first quarterly examinations February 21 and 22, in New Orleans, chemistry building, Tulane University.

PENNSYLVANIA

The Pennsylvania State Pharmaceutical Examining Board in announcing the result of its recent examination of applicants for certificates to engage in pharmacy declared that in enforcing the drug law of Pennsylvania as amended at the recent legislative sessions its chemist had found that samples of the drugs "show that many products are being sold which differ from the legal standard of strength and quality for the same, without the declaration now required appearing on the label."

The board directed that notice be given to all dealers that the standards of the various authorities approved by the last Legislature are in force in the state and that people in the trade must comply with the new law which requires that the quality or standard claimed for a drug which differs in any respect from the legal standard to be stated on the label, side by side with its legal standard.

The next examination will be held in Harrisburg, March 8 and 9, 1918. At the last examination, 18 of 32 candidates for certificates as registered pharmacists were successful and 76 of 123 applicants for papers as assistant pharmacists passed the state tests.

EFFECT OF ADULTERATING SENNA

The Agricultural Calendar of the Madras Agricultural Department contains the following with reference to Tinnevelly senna:

"The history of senna cultivation in Tinnevelly is one that teems with interest. Its history is of special importance to the ryot (small farmer) who grows it, to the man who adulterates it, to the firm that exports it, and to the Agricultural Department, which aims at improving the lot of the ryot by protecting his interest. Senna (*cassia angustifolia*) is a small shrub. Its home is Arabia, and knowledge of the medical properties of its dried leaf was introduced into both Indian and European pharmacy by the Arabs. They held a monopoly of this drug only so long as they could market it in a pure state. When they commenced adulterating it with useless leaves of other plants their trade was lost.

"The middleman increased his temporary profits, but the result is that the price offered for Tinnevelly senna has once more fallen to such an extent that its cultivation is no longer profitable. Instead of getting 8 rupees per tulam the ryot now gets 8 annas only. The Tinnevelly ryot had anticipated high prices for senna for the duration of the war. Had the product been exported in a pure state it is highly probable that substantial profits could still be made; as it is, a considerable acreage is being uprooted owing to the low price the leaf commands."

Patents and Trade Marks

PATENTS

Granted December 18, 1917

1,250,132—Charles R. Blundell, Tucson, Arizona, assignor of one-half to Wm. J. Bryan, Jr. Art of process of making and extracting the medicinal properties of the larrea mexicana or hedionda.
1,250,383—Bernard E. Taylor, Holyoke, Colo. Attachment for test-tube dividers.
1,250,471—Herman B. Kipper, Muskegon, Mich. Process of producing fused ferric sulfate and sodium sulfate.
1,250,534—Frederick E. Walden, Worcester, Mass., assignor to Boston Wrench Co., Bottle-cap.
1,250,642—Benjamin Peacock, Philadelphia, Pa., assignor to Larrowe Construction Company, Detroit, Mich. Process of making oxid and hydroxid of barium.
1,250,678—Emma Sharp, Sherwood, Oregon. Cork-puller.

Granted December 25, 1917

1,251,429—William W. Shaw, Augusta, Me. Non-refillable bottle.

Granted January 8, 1918

1,252,452—Walter Kropp, Elberfeld, Germany, assignor to Synthetic Patents Co. Inc., New York. Pharmaceutical product.
1,252,507—Konstantin Tarassoff, Moscow, and Peter Shestakoff, Petrograd, Russia. Process for obtaining hard products of condensation of phenol and formaldehyde.
1,252,726—Walter A. Schmidt, Los Angeles, Cal., assignor to International Precipitation Company. Process and apparatus for accelerating chemical reactions.
1,252.742—Alexander R. Tillinghast, Solvay, N. Y., assignor to Semet-Solvay Co. Process of making sodium ferro-cyanid.
1,252,784—Abraham B. Cox, Cherry Valley, N. Y., assignor to General Reduction Gas and By-Products Co., New York, N. Y. Process for purifying potassium chlorid.
1,252,976—Alfred A. Wells, Caldwell, N. J., assignor to Ellis-Foster Company. Process for making nitric acid from ammonia.
1,253,048—Herman B. Kipper, Muskegon, Mich. Process of purifying crude benzol.
1,253,055—Burritt S. Lacy, Sewaren, N. J., assignor, by mesne assignments, to The Roessler & Hasslacher Chemical Company. Process of manufacturing alcohols.
1,253,060—Otto Liebknecht, Frankfort-on-the-Main, Germany, assignor to the Roessler & Hasslacher Chemical Company, New York, N. Y. Process of making alkali perborates.

TRADE-MARKS

Published December 25, 1917

101,905—Thomas Fealy, Portland, Ore. Preparation for pyorrhea.
102,964—John C. Sharer, Alliance, Ohio. Preparation for a remedy in pill and liquid form for indigestion, etc.
103,917—A. Bourjois & Co., Inc., New York, N. Y. Face-powder and perfumes.
103,921—A. Bourjois & Co., Inc., New York, N. Y. Face-powder and rouge.
105,102—Roy L. Robinson, Dinuba, Cal., Liniment for rheumatism, cuts, etc.
105,292—105,293—105,294—Freeport Chemical Co., Freeport, Texas. Flowers of sulphur.
105,704—Sanol Chemical Co., St. Louis, Mo. Liver pills; preparation for chills, fever, etc.
105.958—The Celluloid Company, Newark, N. J. Pyroxylin preparation for the treatment of articles preparatory to examination thereof under a microscope.
106,366—George Logotheti, Brooklyn, N. Y. Cathartic compound.
106,497—Shanker A. Bhisey, New York, N. Y. Medicinal preparations for internal treatment of fevers, colds, headache, sore throat.
106,535—106,536—Stephen Fargo, Cleveland, Ohio. Preparation for catarrhal colds, headache, and coughs.
106,588—Standard Remedy Company, Lynn, Mass. Veterinary remedies.
106 639—Delia Slavin, Eldred, Pa. Ointment for old sores, cuts, etc.
106,770—106.771—Dean Medicine Company, Milwaukee, Wis. Cough-drops.
106,839—Frank R. Miller, Rosalia, Wash. Liquid preparation to be used in the destruction of bacteria.
106,856—The Ego Remedy Co., Salt Lake City, Utah. Corn remedy, a liniment, etc.
106.898—Pocahontas Owens, Chester, Pa. Scalp food.
106,947—International Druggists' and Chemists' Laboratories, Inc., New York, N. Y. Preparation for dyspepsia, indigestion, and other disorders of the stomach caused by hydracidity.
106,980—Kersey E. Bradley, Akron, Ohio. Medicine for inflammation of the kidneys and bladder, backache, etc.
107,007—H. R. Lathrop & Co. Inc., New York, N. Y. A tonic in tablet form.

Published January 8, 1918

93,572—The Floral Drug Company, Scranton, Pa. Cough-mixtures.
103,091—R. M Shellabarger, West Liberty, Iowa. Remedy for general weakness, indigestion, etc.
106,509—The La Valliere Co., New Orleans, La. A cosmetic.
106,580—The Kolox Company, New York, N. Y. Remedy for hay-fever, asthma, etc.
107,164—Mazri Laboratories, Dayton, Ohio. An eye remedy.
107,203—F. Ad. Richter & Co., New York, N. Y. Hair-tonic.
107,205—The Schulze Remedy Co., Kansas City, Mo. Laxative tablets
107,273—The J. B. Williams Company, Glastonbury, Conn. Face-lotions, and after-shaving preparations.

CELEBRATE FIFTIETH ANNIVERSARY

A feature of the recent celebration of the fiftieth anniversary of the organization of the Mallinckrodt Chemical Works, held at the home offices of the company in St. Louis, was the presentation to Edward Mallinckrodt, Sr., president of the company, of a beautiful bronze tablet bearing his likeness. The year just closed marked the completion of a half century of the company's existence, and the celebration was a notable event in the drug and chemical trade circles of St. Louis. In connection with the celebration, a banquet was held at the Mercantile Club, about a hundred of the officials, representatives and friends of the company being present. L. G. Blakeslee acted as toastmaster, and speeches were made by Edward Mallinckrodt, Sr., Edward Mallinckrodt, Jr., O. L. Biebenger, secretary; H. T. Jarrett, manager of the New York house; L. G. Ryan, manager of the Canadian house, and J. H. Fink, of the export department, New York.

ABBOTTS LICENSED TO MAKE BARBITAL

An important item of news information to druggists is the announcement of the Abbott Laboratories, of Chicago, published in the advertising pages of this issue of the Era. Under the provisions of the trading with the enemy act, this concern has been granted a license by the United States Federal Trade Commission to manufacture the product introduced as "Veronal" under the name of "Barbital," the latter name being that adopted for this product by the Federal Commission.

The Abbott Laboratories is one of the first concerns in the country to be granted a license under this new war measure, a fact which in itself is indicative of the resources and ability of this company to engage in this highly specialized field of chemical manufacturing. Among other new products made by the company are Chlorazene, Dichloramine-T, Halazone, Parresine, and Acetyl Salicylic Acid Tablets, all of which are extensively employed by physicians and represent the latest developments in scientific medicine. By specifying "Abbotts" on your orders to jobbers and then supplying "Abbotts" to your patrons you will be encouraging the manufacture of important chemicals by a purely American firm.

PREPARING CARREL-DAKIN SOLUTION

The Norwich Pharmacal Company has recently placed on the market a very practical and simple package containing certain powders which, when mixed with water and filtered in accordance with simple directions, form a true Carrel-Dakin solution that is neutral and contains the required amount of Sodium Hypochlorite. The package is simple and convenient and eliminates all fuss, bother and worry. As small an amount as one pint can be prepared at a time, thus permitting of frequent lots of fresh solution being used. The company has issued some very interesting literature on the subject of Dakin's Powders, a perusal of which is well worth the time of anyone who desires to post himself on modern antiseptic methods. A postal request to the Norwich Pharmacal Company will bring you a copy.

Belladonna Root Adulterant (Yellow Dock Root)

Examination of samples of importations of "belladonna root," *Atropa belladonna* L., has disclosed that the roots of yellow dock, *Rumex crispus* L., were substituted in one instance for the true material. The roots of *Rumex crispus* are externally reddish brown, deeply longitudinally wrinkled, finely annulate above, and have a somewhat fibrous fracture, whereas those of *Atropa belladonna* are externally pale brownish gray, show only weak longitudinal wrinkles, and have a nearly smooth fracture. The department will recommend the detention of shipments labeled "belladonna root," consisting wholly or in part of roots of yellow dock .

ESTABLISHED 1887

THE PHARMACEUTICAL ERA

AN ILLUSTRATED MONTHLY PUBLICATION FOR THE DRUG TRADE

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A BINDER
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WORK OF THE A. PH. A. BRANCHES

If any proof of the vitality and usefulness of the American Pharmaceutical Association be needed, it will be found in the work of the branches of that organization in various sections of the country. These subordinate bodies constitute a direct means of carrying information to many members who otherwise might never come in contact with their colleagues or competitors, especially at a time when the spirit of scientific inquiry is uppermost. True, there are druggists who band themselves together to discuss business problems and to fight antagonistic legislation, but the occasions are rare at such meetings when subjects representing real scientific knowledge receive attention comparable to that which obtains at the average branch meeting.

The system of organizing branches by the parent body of the A. Ph. A. has now been in operation long enough to show the practicability of the scheme. It means, at least in the large cities if the members are sufficiently alive, that if you cannot go to the association, the association will come to you. Not all of the branches that have been instituted can boast of an equally glorious history, but in the main the record has been a meritorious one. The papers and discussions of most of these subordinate bodies have been in a high degree informative, a majority of them dealing directly with the live topics of the day.

As we see it, there are many pharmacists who fail to appreciate the possibilities of this plan of organization work. As a medium for disseminating general scientific information, the branches offer unusual educational opportunities. The same reasons that are urged upon physicians to join medical societies can be advanced why pharmacists should join associations which devote their efforts mainly to the scientific side of pharmacy. The pharmacist by contact with the world may acquire the knack of making a neat package, or by individual practice may learn to handle a pencil or brush sufficiently well to print an artistic sign, and such skill is not be belittled. But let the druggist by himself attempt to tackle some of the pharmacopoeial tests of the present day developments of serum therapy, he is hopelessly lost. The work the members of the various branches have done on the question of sugar substitutes during the past two or three months has done more to inform druggists of what they may do to bridge a sugar famine, should such a shortage occur, than any other investigation that could be suggested. In encouraging and maintaining these subordinate organizations, the A. Ph. A. is carrying real post graduate information to the door of the pharmacist, and there is no reason why the number of branches should not be greatly extended.

WILL PHARMACY FIND HERSELF?

Considerable interest attaches to the appeal made by Dr. A. L. R. Dohme, appearing in the February issue of the *Journal of the A. Ph. A.*, inviting the pharmacists and the entire drug industry of the country to consolidate their interests, not their business, and to organize their activities in such a manner that the future of pharmacy in all its branches will become as representative, and its degree respected as that obtaining in the sister branches of medicine and chemistry. Distinguished workers in the allied fields of pharmacy have, in varying degree, broached this subject before, each effort in a way tending to show the present trend of thought, and also the growing conviction that in any forward movement members of all professions and industries must consolidate their interests and adopt a degree of collectivism which, politically at least, has become the rule of our time—the representation of groups.

Such a movement is now general throughout the entire country, embracing nearly every form of human energy and endeavor, whether relating to advance in science, industry, religious thought or manner of living. This welding together of individuals into groups having similar wants and aspirations reflects the sociological character of our day. There is no doubt but that the disturbing conditions of the present have emphasized the tendency and accelerated thought in this direction, yet the movement is going forward and pharmacy is not without the sphere of its influence. In order to advance in unison with other marching hosts and to rise to an equality with medicine and chemistry, it must align itself, pool its interests and consolidate its driving forces if it is ever to reach an advanced position in the busy world of professionalism and achievement.

The enthusiast of today may be leader of tomorrow. Pharmacy needs radical thinkers and men of action. There is many a pharmacist of today who is no longer satisfied to earn his living on purely a commercial basis, although of necessity he must know that success in this age is measured in degrees of barter and sale. He will also recall, if he has studied the history of the world's great advances, that the discoveries and inventions that have contributed to the betterment of civilization have been wrested from the elements and forces of Nature or welded together in the laboratory of action with little regard to ultimate financial returns, yet mainly to benefit and supply the needs of humanity.

To bring about conditions that will unify and benefit the entire profession and industry in the widest sense is a proposition which merits the attention of every thinker connected with the calling. Current events seem to indicate the correlation of pharmaceutical forces. The idea is present in the work educators are now planning in schools of pharmacy. Pharmaceutical manufacturers need trained research workers to unravel their problems, and the practitioners of medicine need new information on the constitution of many substances which have a place in the materia medica. With the demands that are being made, and the conditions and opportunities confronting the entire trade in mind, Dr. Dohme is right when he says that this is "the psychological moment for all drug associations to consolidate and co-operate." In the light of the present this line of action gives the best promise of a real answer to the question "Will pharmacy find herself?"

SAVE FOR THE NEW LIBERTY LOAN

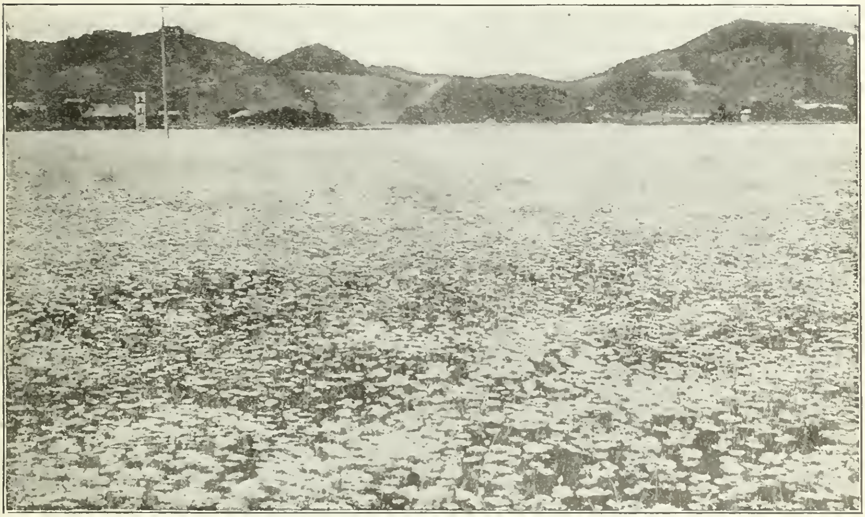
Money cannot make good for the nation the shortage in labor nor can it supply raw materials for the industries of the country with the demand at the present high pressure and coal and transportation facilities inadequate to make them available. It is only by curtailment in individual wants and in non-essential industries that the war supplies can be produced and delivered because there is not enough capital, labor, coal, raw material, or sufficient rail and shipping transportation to meet the requirements of the entire country. It is only by economy in the use of all these things that the new loan which the Government is to negotiate in March and April can be made a success. By cutting out the luxuries there will be money available to take up the loan.

It is estimated that ten billions of dollars must be raised before June 30 of this year. The people have the money and there is no safer investment than Liberty bonds. But the money must be taken out of savings and not out of capital and this is best accomplished by sacrifice of luxuries in order to protect the savings and not exhaust the country's resources in case of still further needs by the Government. The war must be fought to a successful finish and the present loan is even more important than the two already placed because the crucial time is at hand when the United States forces will assume the burden of battle.

With the return of Spring comes an opportunity for the pharmacist to apply his technical knowledge relating to the character and use of various methods and products employed to prevent the spread of infectious and other diseases. Of course, almost every individual has some kind of an idea as to current theories of the causation and spread of disease, and also, that disinfection of some sort is an important factor and needed at times around his habitation. With Spring housecleaning comes the pharmacist's opportunity, and by acquainting himself with the theories underlying the use and application of disinfectants, he puts himself in a position to give valuable information on the subject and likewise give himself the chance to increase his sales of a large number of products used for disinfecting and general sanitary purposes. Some practical information on this subject appears elsewhere in this issue of the Era.

Cultivation of Insect Powder Plants

Industry No Longer Restricted to Austrian Provinces, Japanese Plantations Producing Large Quantities



Scene on a Japanese plantation showing a field of C. ccinerariaefolium. The plants have reached the flowering stage and are ready for harvesting—Photo from McCormick & Co., Baltimore.

IN an insecticide decision handed down by the United States Board of Agriculture in 1911 will be found the first official attempt to define the meaning of "insect powder," the board holding that the words were used in both a generic and a specific sense, the former sense obtaining where no attempt is made to designate a particular article. "Insect powder" when used without qualification, however, signifies a definite article, the term being specifically applied to the dried unexpanded flower-heads of *Chrysanthemum cinerariaefolium*, Vis. (*Pyrethrum cinerariaefolium*, Trev.) and *O. coccineum Willd.*, also known as *C. roseum*, Web. et Mohr., plants belonging to the Natural Order Compositae. The first named species yields the Dalmatian, the latter the Persian or Caucasian flower-heads. The plant producing the Dalmatian variety, is a perennial herb indigenous to and cultivated in Dalmatia, a province of Austria; Montenegro, Herzegovina, some authorities stating that the wild Montenegrin flowers are most esteemed.

Flower-heads of the insect powder plant which closely resemble those of the field daisy.

For many years great secresy was maintained as to the methods of cultivation and production but gradually knowledge of this industry was carried outside of Western Asia, so that the plants have now been successfully introduced to cultivation in various other countries and the industry has attained commercial importance in California, Japan and northern Africa. Experiments in New York State are to the effect that the plants can withstand the winter and yield an active product, but so far, the cultivation has never been attempted on a commercial scale.

In harvesting, the stems are cut, the flower-heads being torn off by a combing machine, carefully dried and preserved. The Persian insect flowers are distinguished by the dark involucral bracts, and by the ten-ribbed fruits. Three varieties of Dalmatian insect flowers appear in commerce, these generally being classed as "closed," "half-closed," and "open," the first variety being most esteemed and commanding the highest price. The inclusion of powdered stems with the various grades is met with, the resulting mixtures being quoted in commercial price lists as "powdered flowers and stems" at lower prices.

The cultivation of the plants to secure the most efficient insect flowers requires considerable knowledge of a practical character. The method modernly adopted, as described by P. Siedler (Year Book A. Ph. A., 1912), requires the selection, as far as practicable, of virgin soil, which is prepared by lightly hoeing to the depth of 20 to 30 Cm., and during the first rain in September spreading crushed flowers, which are hoed under to the depth of about 5 Cm. The young plants appearing the following spring are left undisturbed during the first year, being at most freed from weeds, if necessary. A few flowers only appear during this period, but during the second and third years an abundant crop is produced, provided rains set in at the proper time, while during the fourth year the crop is quite insignificant and is no longer remunerative. According to Siedler, by this method the flowers produced, although not as elegant, by far exceed in strength the handsome flowers cultivated by the method practiced on the Istrian Islands in the neighborhood of Fiume, which yields not only more perfect flowers and also larger crops, though greatly inferior in activity.

The cultivation of *C. cinerariaefolium* was introduced into California in the eighties by Dalmatian settlers, where it is now followed on a commercial scale, the care given to the preservation during drying of the color and of the volatile oil being claimed to produce a superior product. About thirty years ago, the cultivation of the insect powder producing plants was taken up in Japan, the climate of which was found most favorable for the full development of *C. cinerariaefolium*. According to a private communication from Mr. Ueyamayei, of Yamatahara, Aritagun, the first plantation for the growing of insect flowers and the manufacture of the powder was established in Japan in 1885. He states that the powder was found very effective in destroying insects, being first used to kill such insects as fleas, bugs, cockroaches, lice, etc., but its employment as an insecticide for animals and birds, and even in horticulture widened until it has become one of the chief productions of Japan.

Practically no Dalmatian insect flowers are to be obtained in this country at the present time, although it is said that some manufacurers still continue to label their product as "Dalmatian powder." As a matter of fact, manufacturers state, one cannot tell Dalmatian powder from Japanese powder by analysis, but under a strict construction of the Insecticide Board, flowers having their origin in Japan, cannot be labelled as "Dalmatian." Persian flowers are also now entirely off the market, though the importations reaching this country at any time has never been large. Powder from Persian flowers, even when the flowers are of the very best grade, has never been considered the equal to that produced from the Dalmatian or Japanese flowers.

Since the beginning of the European war Japanese insect powder has become an article of commercial importance. The powder, as shipped from Japan, is made from ground pyrethrum flowers, and is usually exported under that designation, or as "pyrethrum insect powder." While the seeds from which the plants were originally grown came from Dalmatia, it is said that the names "Dalmatian powder" and "Persian insect powder" are never used in Japan in connection with ground pyrethrum flowers grown in that country. The flowers are grown principally in the prefectures of Wakayama, Hiroshima, Okayama and Shizuoka, most of the factories being also located in the same prefectures or in Osaka.

According to recent advices, the Japanese pyrethrum flower crop for 1917 was very large, amounting, according to estimates, to more than 4,000 tons, an increase of 100 per cent. over the crop of 1916. In spite of the large crop, however, prices in Japan have remained unusually high, the producers holding on to their supplies in the hope of a large demand from America and Europe. Commercial advices state that ruling prices in Japan since September have been about $25 per 100 kin (133 pounds) for flowers, and $27.50 per 100 pounds for powder. During the past six months current quotations on original packages in the New York market have fluctuated between 29 and 40 cents per pound.

Much has been written in recent years concerning the distinguishing characteristics of insect flowers, and several methods have been proposed for determining the value of the powder produced therefrom. In the application of these methods they require all of the skill of the trained pharmacognosist who must be able to determine the botanical characteristics of the various types, apply microscopical tests and determine the oil and ash content of the various samples. A method of evaluating the powder by counting the number of pollen granules, suggested in recent years, is considered as a criterion of value, the comparative number of pollen grains being looked upon as an index of the quality of insect powder. Trottner, a German investigator using this method, reported that closed insect flowers personally pulverized by him were found to contain from 2,000 to 2,800 pollen grains to the milligram, while the open flowers contained from 150 to 200 pollen grains to the milligram. These figures were fairly well confirmed by an examination of authentic samples obtained from German firms, leading him to recommend that no powder should be considered as from closed flowers unless it contains at least 2,000 pollen grains to the milligram, and that no powder should be considered good unless it contains at least 1,000 pollen grains to the milligram.

According to Kraemer ("Scientific and Applied Pharmacognosy"), insect flowers contain from a trace to 0.5 per cent. of a volatile oil, the Persian flowers containing a larger proportion, and the amount decreasing with the maturing of the flowers. They also contain two resins, varying from 4 to 7 per cent., the larger amount being found in the Dalmatian flowers; a small quantity of a glucoside and a volatile acid. The toxic principle is pyrethron, an amber-yellow, syrupy substance which is the ester of certain unidentified acids, and which on saponification yields the alcohol pyrethrol, crystallizing in fine needles.

The statements concerning the constituents and preparation of insect powder are somewhat conflicting, but there seems to be no question but that the insecticidal properties are due to the toxic principle named above, called by some authorities "pyrethrotoxic acid," a yellow, butyraceous substance which is not volatile. Whether the flowers should be dried in the sun or in the shade, has been a disputed question. If dried in the sun, it has been claimed, the flowers would lose a portion of their volatile oil, while the slower process of shade-drying would expose the flowers to some danger of deterioration. Neither of these questions, apparently, has been satisfactorily settled, but experimental proof tends to strengthen the belief that the powder does not lose its activity on exposure to air.

Another view of the C. cinerariaefolium showing a different period of growth.

Dalmatian powder should have a greenish-yellow color, an odor somewhat resembling tea, and an aromatic and slightly bitter taste. It contains 8 to 10 per cent. of moisture and yields 6.5 per cent. to 7 per cent. of ash, almost wholly soluble in hydrochloric acid. The finer the powder, the more efficient its action. The Persian insect powder is similar, but somewhat darker, or grayish yellow. According to the authors of the National Standard Dispensatory (1916), the following simple method of assay will serve to detect adulterations readily; Macerate 8 grams of insect powder for an hour with 80 grams of ether, shaking the mixture frequently. Then decant or draw off 50 grams, add 1 cc. of water, and shake thoroughly. Filter, and wash the filter well with ether, transferring the filtrate and washings to a tared flask, and distil. Finally, weigh the soft residue. Half-opened buds yield to 7 per cent. of extract, and unexpanded buds from 7.5 to 9.5 per cent. The ethereal extract of pure flowers is of a golden-yellow color, while that of the stem has a dirty green tint. Stem adulteration is also detected by microscopic examination, the powder exhibiting numerous large particles of glistening wood fibre and sclerenchymatic tissue and large hairs sharpened at both ends. Quassia, quillaja, fustic and chrome-yellow are said to be used as adulterants, and all increase the ash-percentage, pure insect powder yielding, as stated above, about 7 per cent. of ash. Aloes and curcuma are said to impart a suspiciously bright color, while the common field or ox-eye daisy and the yellow immortelle or everlasting have been found in commercial powders. At the present time, however, especially since the enactment of law relating to insecticides, the adulteration of insect powder is limited almost exclusively to the admixture of powdered stems, the addition of other flowers being rarely resorted to.

The usual method of employing insect powder is to sprinkle the powder in places frequented by insects, and in the case of man and animals, to apply it to the surface of the body, dusting it over articles of clothing or on the coats of animals. It is said that an infusion or tincture is not as efficacious as the powder; a tincture of the flowers prepared with 60 per cent. alcohol (1 in 4), and diluted with 10 parts of water, has been recommended as a serviceable application to dab on the skin to prevent insect bites. The fumes of the burning powder are also destructive to insects, and when used in this manner, small cones or pastilles are made of the powder by the addition of about 5 per cent. of potassium nitrate and sufficient mucilage of tragacanth to form a stiff mass, which is then formed into the desired shape and dried.

Points and Methods in Practical Disinfection

By EMMA GARY WALLACE

Disinfection constitutes one of the most efficient means of controlling the spread of infectious diseases. A general knowledge of the causation of such diseases and of the methods and agencies employed to accomplish this end is therefore of paramount importance to the druggist. In order to make the most of his opportunities as a purveyor of the various substances employed to counteract the spread of communicable and other diseases, it is necessary for him to acquaint himself with the general principles underlying the whole subject of remedial measures and their application under varying conditions. As will be inferred from the author's treatment of this important subject, a general knowledge of sanitary measures and the uses of various disinfectants should be acquired by every pharmacist who wishes to capitalize hisprofessional attainments.

WHILE of course official disinfection and fumigation belong to the local Board of Health, yet it is the druggist's province to be able to give helpful information and timely assistance whenever he is called upon.

There are many cases of illness where the Board of Health does not interfere and yet for the safety of all concerned, intelligent precautions must be taken against the spread of disease. The early spring months are rather sure to see considerable sickness of an infectious character. Much sickness can be prevented if the druggist is able to give a few simple directions for disinfecting bath rooms, bedding, handkerchiefs, and wood work. Incidentally he should have the chemical supplies ready to furnish and be able to tell *just how* to use these.

To begin with, an *infectious disease* is one which is caused by the entrance into the body and the multiplication therein, of disease-inciting micro-organisms.

Infection is the process of the incitement of an infectious ailment. The process of infection according to an eminent authority, "Marks the interaction between the invaded animal organism and the attacking micro-organism." It is a sort of battle between the invader and the invaded, and if reinforcements in the way of disinfectants are furnished at the right time, the disease can usually be driven back.

An infective agent is a living micro-organism or germ capable of causing infectious disease when placed under favorable conditions. Such infective agents are usually transmitted in the secretions or excretions of those suffering from communicable infectious disease, or those who though not themselves affected, act as "carriers" of pathogenic micro-organisms. We have many examples of such "carriers" who harbor disease germs and even serve as a garden for their multiplication without being sick themselves.

A communicable disease is an infectious one which may be transmitted from either the person suffering from it or a "carrier" to others in such a way as to result in fresh cases of the disease.

The incubation period is the time which elapses between the entrance into the body of the disease germs and the appearance of the symptoms or development of the first stages of the ailment.

Epidemic diseases are those which are abnormally prevalent within a limited area involving a considerable number of persons.

A disease is said to be *endemic,* according to Webster, when it is permanently or ordinarily prevalent in a locality and dependent on local conditions; as the bubonic plague is said to be endemic in Bombay, and epidemic when it breaks out in one of our cities.

Cultures are growths of micro-organisms. Sometimes cultures are developed under artificial conditions especially for the purpose of determining their character. Again, cultures are groups of germs taken from a patient who is suspected of having a communicable disease. Of course, the purpose of isolating the culture, as that taken from the throat in a case of diphtheria, is to determine the proper treatment for the individual and to safeguard the community.

Exposure to a communicable disease is coming into direct contact with either a patient suffering from such disease, or with secretions or excretions from his body or clothing or other articles which may serve as germ carriers directly or indirectly.

Isolation is the separation of a patient suffering from a communicable disease from others not ill to prevent others being infected. At the close of the period of isolation or quarantine, proper measures of cleansing and disinfecting the patient, caretakers, clothing, bedding, and rooms should be thoroughly carried out.

Disinfection means the destruction of pathogenic organisms or germs—that is harmful disease germs.

Sterilization is the killing of all micro-organisms or germs. It is in fact making sterile or germ-free.

An *antiseptic* is a substance which inhibits, that is holds back or retards the growth and multiplication of micro-organisms. "An antiseptic does not definitely destroy their life."

A *deodorant* is a substance, liquid, solid or gaseous, which destroys or masks offensive odors. There is a good deal of misunderstanding about a deodorant. Such substances may destroy the source of the offensive odor or they may conceal or destroy the odor itself. Deodorants are sometimes but not always, antiseptic in character; sometimes but not always they serve as a disinfectant as well.

In furnishing a disinfectant, an antiseptic, a deodorant, or a sterilizing medium, the druggist should be able to tell his customer what the goods sold will do if they are properly handled. There is no doubt about it that a great deal of confusion exists in the lay mind as to these things, and if a customer purchases a deodorant and uses it, thinking she has employed a disinfection or sterilization process, she is deceived. And if the disease spreads, she blames the druggist and says with some show of reason, at least from her standpoint, that the stuff he has sold her was no use. In short, confidence in the druggist is undermined, not only in that family but in that neighborhood of families. So it is very important that in the druggist's own mind, these preceding distinctions be exceedingly clear in order that they can be made clear to others.

Practical Disinfection

The three *physical* agencies most destructive to micro-organisms are heat, sunlight, and desiccation or the process of drying up or evaporating all moisture. The more exact our knowledge concerning a disease, the more surely may thorough and certain disinfection be made, for the reason that we can pursue the enemy germs into their own trenches and kill them off without wasting ammunition.

For example, the discharges of diphtheria, scarlet fever, measles, cerebrospinal meningitis and poliomyelitis are received on old cotton or absorbent gauze and promptly burned or immersed in strong disinfecting solutions, thus preventing the spread of the disease. Again, in cases of typhoid fever and dysentery where the infective germs are principally harbored in the excreta of the body, these are promptly destroyed and further disinfection is an easy matter. If we did not know, however, just where to look for the germs of each disease and how to treat them, we would be subject to frightful epidemics, even as people were in years gone by.

The druggist requires a knowledge of these things in order that he may offer intelligent and far-reaching help in the disinfection of institutions and public conveyances as well as individual homes. *Cleanliness* cannot be over-emphasized. Hot water, soapsuds and sunlight are within the reach of all, but they are so common that people do not use them for all they are worth and oftentimes a germicidal substance added to the soapsuds will make people think that thoroughness is well worth-while.

The New York State Department of Health has worked out some very practical formulas and has tested them over a large area of time, finding them eminently satisfactory. The Soapsuds Solution recommended by the Department is prepared by adding one ounce of common soda to twelve quarts of hot soapsuds. This is used for ordinary cleaning and for washing articles requiring disinfection. It is excellent to use for such purposes in the care of whooping cough where there is danger of constant re-infection.

Strong Soda Solution is made by dissolving one-half pound of common soda in three gallons of hot water. This is applied with a hard-bristled scrubbing brush. It is both a good cleaner and a disinfectant of no small value.

Certain articles are best disposed of at once by burning—for instance, mattresses which are difficult to cleanse thoroughly, cloths containing sputum discharges, etc.

Live steam is highly effective, for exposure to live steam for half an hour will kill all infective germs. Of course, articles like pillows must be exposed long enough to permit the entire content to be thoroughly reached. Contaminated fabrics which will not be injured by temperature and moisture, can often be disinfected by steaming. Steam sterilizing chambers are commonly maintained by institutions and municipalities, and the latter should be available upon payment of a reasonable charge. Actual boiling of articles which will not be injured by the process, is another means of germ killing—clothing, bedding, dishes. A half an hour brisk boiling will kill disease germs and render the articles safe.

But these means are not always possible and we have to fall back upon chemical disinfectants. The most important of these are carbolic acid, corrosive sublimate, chloride of lime, alcohol, and formaldehyde. Of course the gas of formaldehyde, burning sulphur, etc., reaches crevices and cracks impossible to penetrate with liquids. It is important to remember that if a disinfectant is to do its work properly, it must mix readily with and thoroughly soak or penetrate all of the material in which the infective organisms are, and moreover time should be allowed for the disinfectant to do its work. The following solutions are those recommended by the New York State Department of Health, are simple to prepare, and practical in their nature:

SOLUTIONS FOR DISINFECTION

1. *Strong carbolic acid solution* (5 per cent). Add one pint or a pound of either the crude or purified liquid carbolic acid to two and one-half gallons of hot water and stir frequently until no red or colorless droplets remain in the bottom of the mixture.

2. *Carbolic acid solution* (2.5 per cent). To one part of carbolic acid solution number 1, add an equal amount of water.

3. *Strong bichloride of mercury (corrosive sublimate) solution* (1-500). Dissolve one ounce of bichloride of mercury in four gallons of hot water. A little blueing should be added to color the solution and indicate its poisonous character. Bichloride of mercury solutions must be made in glass, enameled or earthenware vessels as they corrode metals.

4. *Bichloride of mercury (corrosive sublimate) solution* (1-1,000). Dilute one part of bichloride of mercury solution number 1 (paragraph 3, above) with an equal amount of water.

5. *Alcohol solution.* Four parts of 95 per cent alcohol and one part of water.

6. *Chloride of lime solution* (10 per cent). Prepare by adding one pound of good chloride of lime to one gallon of water and mixing thoroughly. This should be prepared only as needed.

7. *Milk of lime.* Owing to the importance of using freshly prepared solutions and the favorable effect of the heat produced by slaking upon the efficacy of the disinfection, the following method is recommended:

(a) Add unslaked lime directly to the infective material, suspended in water, in the proportion of one part to eight parts of the material.

(b) When a solution is required the lime should be slaked by mixing one part of lime with four of water and adding one part of this solution to one part of the material to be disinfected; but this solution must be used promptly.

Air-slaked lime will not serve.

Preparation of liquor cresolis compositus. Dissolve 2.7 ounces of potassium hydrate in 2 ounces of water. Add 11.8 ounces of linseed oil. Mix thoroughly. Add 17 ounces cresol and sufficient water to make 34 ounces of solution. The preparation should be made in a wooden bucket or an earthenware jar.

Caution: Poisoning and Antidotes

Carbolic acid and bichloride of mercury are violent poisons and great care should be taken to see that disinfectant solutions are kept out of the reach of children. If, by accident a disinfectant solution is swallowed, a physician should be sent for at once. Do not wait until he arrives, but give the proper antidote as quickly as it can be prepared.

Antidotes for carbolic acid. Olive oil, and castor oil.

Antidotes for bichloride of mercury. Raw eggs, flour paste, and milk.

Try to provoke vomiting so as to empty the stomach. For this purpose give mustard and water, or salt and water, or tickle the back of the throat.

Some of the childish diseases are thought not to be especially dangerous, yet statistics show that large numbers of deaths occur annually from many of these, while others leave a train of weakness and suffering behind. Among the communicable diseases in which the disinfection of sputum and discharges from the mouth, throat, nose, eyes, and ears are of especial significance as conveyors of infective agents are: diphtheria, measles, mumps, chickenpox, whooping cough, tuberculosis, epidemic cerebrospinal meningitis, poliomyelitis, epidemic streptococcus or septic sore throat, scarlet fever and smallpox. For the disinfection of such discharges the 5 per cent. carbolic solution is best, being more effective than the sublimate solution for the reason that a coating of albuminate of mercury is rapidly formed about the micro-organisms as soon as the sublimate solution touches them, thus preventing their thorough destruction.

Precautions for the Individual

The skin cannot be boiled or kept in live steam or exposed to formaldehyde gas, so we must provide special means for safety. First there should be a thorough cleansing with soap and preferably an antiseptic soap, and warm water. Scrub with a brush. Wash all infected areas with the 2½ per cent. carbolic solution or with the 1 to 1,000 sublimate solution, and then wash with soap and ness follows, wash with a 75% solution of alcohol.

Where there is a communicable disease, a 2½ per cent. solution of carbolic or the 1 to 1,000 solution of sublimate and soap and water, should be instantly accessible—not in a bottle, but in a basin into which the hands may be dipped. Emphasize further the use of rubber gloves. Every home should have a pair, especially for sickness. These can be disinfected in the 5 per cent. carbolic solution or the 1 to 500 bichloride solution.

Hypodermic injection should be preceded by a cleansing with soap and water, and disinfection with alcohol, or alcohol and ether, or by the application of iodine.

Where the mucous membrane of the nose and throat require attention, we must resort to special means. Here are two conventional formulas:

Alkaline Solution

Sodium bicarbonate	0.5
Glycerin	10
Alcohol	30
Water	60

Acid Solution

Vinegar	10
Glycerin	10
Alcohol	30
Water	50

Room Disinfection

In disinfecting a room, it should first be cleaned, the woodwork and floor washed with the 1 to 1,000 bichloride solution, and afterwards wiped with a moist cloth. Following this, formaldehyde candles may be burned in the presence of moisture or the usual process followed. The room should be sealed during the operation. Drawers and closets should be opened, books held open, and clothing spread out.

The rule given for the preparation of the disinfectant is that the length, breadth, and height shall be multiplied together and divided by 1,000. This gives the number of thousand cubic feet. For example, a room 24 feet long, 13½ feet wide, and 12¾ feet high, will contain approximately 3,744 cubic feet, or nearly 3¾ thousand cubic feet. To disinfect this room, take ten ounces of a 40 per cent. solution of formaldehyde and five ounces of crystalline permanganate of potassium for each 1,000 cubic feet. Thus the room would need 38 oz. of formaldehyde and 20 oz. of permanganate.

Place the permanganate in a large pan, big enough to hold as many *gallons* as there are pints of formaldehyde. This is to make sure the liquid will not boil over. Set this container inside a slightly larger one of wood in order to retain the heat. Place the apparatus in the middle of the room. Place the permanganate in the inner container and pour the formaldehyde upon it. As the gas is irritating to the mucous membrane, the operator must be ready to leave at once, close the door, and seal it.

Every locality has many cases of sickness requiring the application of the foregoing knowledge.

New Antiseptic in Military Surgery

Discovered twenty-five years ago by Dr. Ira Remsen, distinguished American chemist and former president of Johns Hopkins University, this substance was regarded mainly as a product of chemical interest, the process of manufacture being too intricate and expensive for other than scientific purposes. Recent investigations have proved that in the use of phenolsulphonephthalein medical science has found a new diagnostic reagent of great value in determining the character of kidney diseases. In these investigations the work of Dr. H. A. B. Dunning, of Baltimore, has been noteworthy.

THE interesting announcement of a newly perfected diagnostic agent, phenolsulphonephthalein, especially valuable in indicating the nature of disorders of the kidneys, which was made at the American Drug Manufacturers' convention in New York, has focussed attention upon the discovery of a Baltimorean to a far greater degree than before, although it should be said that discovery is not really new, its beginnings dating back twenty-five years. Dr. Ira Remsen, former president of the Johns Hopkins University, who is one of the foremost chemists, was the originator or discoverer. Dr. Remsen's process was intricate and the product too costly for anything other than scientific purposes, and for a long time the substance held interest mainly from a chemical standpoint.

In 1898 it was further investigated by Michael Druck Sohon, one of Dr. Remsen's students, the latter's findings being described in the *American Chemical Journal,* volume 20, No. 4, as follows:

> "A bright red crystalline powder, somewhat soluble in water, more so in alcohol, from which it was precipitated by ether as a yellowish-red crystalline powder, which on removal from the liquor instantly gave up ether, and solidified to a dark mass, which was apparently the same material. The dilute alkaline solution is somewhat purer red than that of phenolphthalein; the more strongly alkaline solutions are purple. It is about as sensitive to alkalies and acids as phenolphthalein. The color does not disappear as readily on heating, and it might be used as an indicator with ammonia."

Further investigation resulted in a great improvement upon the original product, one of the great difficulties encountered by the investigators being to eliminate impurities, which impaired the value of the compound. As at present put upon the market, the improved Remsen substance, which is called phenolsulphonephthalein, has proved the best means known to medical science for diagnosing kidney troubles.

Injected into a man's arm, its reaction will indicate within an hour whether the kidneys are functioning properly, and its importance lies in the fact that it will tell surgeons whether the man can stand an operation; whether, in the case of a soldier, he is fit to remain in the line, and whether he has the requisite stamina for fighting or for severe tests after he has been wounded. In this way the substance has become one of the most valuable aids to the surgeons in the Allied armies, who are able to get an adequate supply of phenolsulphonephthalein from the United States, which is admittedly the only country in a position to furnish the product in its highest state of efficiency. In cases of trench nephritis, for instance, phenolsulphonephthalein is of high value as indicating the precise nature of the malady long before its presence can be determined by any other means, and for this reason it is proving of great benefit to the Allies.

These facts were brought out in a statement made in New York at the time of the chemical convention by Dr. H. A. Brown Dunning, of the Baltimore firm of Hynson, Westcott & Dunning, his familiarity with the subject dating back to the time, when in connection with Dr. John J. Abel and Dr. L. G. Rowntree, both of the Johns Hopkins Medical school, he undertook to improve on the product and overcome some of the drawbacks that attached to its manufacture. The two men mentioned had made considerable progress, but had failed to get an entirely pure product and their process also made the cost well nigh prohibitive. Dr. Dunning succeeded, after long experiment, in turning out a product which had none of the drawbacks of the previous samples, and which could be placed on the market at a price that put it within the reach of the medical profession generally and of the patient.

Taking up the history of the product again, it is to be said that Drs. Abel and Rowntree, the latter the former's associate, while investigating the pharmaco-dynamics of all the phthaleins, some years after the publication by Sohon, who discovered the remarkable manner in which normal kidneys disposed of the compound, fully 80 per cent. of the injected quantity being thrown off through renal functioning, within two or three hours, further examined the substance pharmacologically and found it to be even less toxic than sodium chloride. To Drs. Rowntree and J. T. Geraghty is due the credit for first using phenolsulphonephthalein as a renal test and for first making practical and successful application of it to clinical diagnosis. These investigators acknowledged assistance in their efforts to Drs. Abel, Hugh H. Young, Slagle, Thayer, Lewellys F. Barker, McCrae, Hobelman, Merrill, Howard A. Kelly, Richardson, Guy Hunner, and Dunning, the latter having made and supplied most of the phenolsulphonephthalein used in the investigations, and conducted a long series of experiments himself which led to the results stated.

The conclusions of Drs. Rowntree and Geraghty from renal tests are summarized as follows:

1. Phenolsulphonephthalein as used here has many advantages over all other functional tests thus far proposed.

2. Phenolsulphonephthalein is better adapted for use as a functional test than any other drug previously employed for the same purpose on account of its early appearance in the urine and the rapidity and completeness of its elimination by the kidney and the reliance to be placed on its findings.

3. The method of quantitative estimation of the amount of drug excreted is simple and exceedingly accurate.

4. It is of immense value from a diagnostic and prognostic standpoint in nephritis, inasmuch as it reveals the degree of functional derangement in nephritis whether of the acute or chronic variety.

5. In cardiorenal cases the test may prove of value in determining to what degree renal insufficiency is responsible for the clinical picture presented.

6. The test has proved of value not only in diagnosing uremia, from conditions simulating it, but has also successfully indicated that uremia was impending when no clinical evidence of its existence at the time was present.

7. The test has proved of great value in revealing the true renal condition in cases of urinary obstruction. It is here of more value than the urinary output of total solids, urea or total nitrogen, and enables the surgeon to select a time for operation when the kidneys are in their most favorable functional condition. The improvement in the renal condition in cases of urinary obstruction, following the institution of preliminary drainage, is strikingly indicated by this test.

8. In unilateral and bilateral kidney disease the absolute amount of work done by each kidney, as well as the relative proportion, can be determined when the urines are obtained separately. We do not feel that this is always mathematically accurate, but in our series it has indicated the functional capacity to a degree not attained by any other test.

HALIFAX DRUGGISTS' RELIEF FUND

Work in soliciting contributions for the relief of druggists who suffered great losses in the disaster that visited Halifax in the early part of December last, continues, the total sum received from all sources to date amounting to $1,549. The New York and New England Committee, consisting of the presidents of the State pharmaceutical associations of the Eastern section of the country, is still in the field, the returns showing the canvas that has been made in various Massachusetts and Connecticut towns. The subscription lists are still open and every druggist who can possibly do so is invited to contribute to this worthy cause. The following contributions have been received:

Previously Acknowledged	$1,364.85
J. W. Van Horn, Van Horn Drug Co., Grand Junction, Colo.	5.00
The J. R. Westbrook Co., Newbern, Tenn.	2.00
H. W. Hummel, Charleston, S. C.	1.00
Barrett Drug Co., Inc , Gilbert, Minn.	2.00
Dr. Pedro G. Pando, Zulueta, Santa Clara Prov., Cuba	5.00
	$1,379 85

The following contributions have been received through the New York and New England Committee for the relief of the Halifax Druggists:

J. F. Busby, New Haven, Conn.	$1.00
John Hepburn, Flushing, N. Y.	5.00
H. F. Leffert, Nutley, N. J.	2.00
C. E. Blodgett, Portland, Conn.	1.00
W. D. Ellrich, Boston, Mass.	1.00
James Doran, Danbury, Conn.	2.00
Northrup Drug Store, Danbury, Conn.	1.00
E. H. Williams, New York, N. Y.	$1.00
C. F. Leuthle, New York, N. Y.	2.00
T. G. Prytherch, Brooklyn, N. Y.	2.00
B. C. Stevenson, Brooklyn, N. Y.	5.00
R. F. Isbell, New Haven, Conn.	1.00
C. W. Brooks, Boston, Mass.	2.00
Joseph Oliver, New York, N. Y.	1.00
Mara & Eggleston, Norwich, Conn.	1.00
C. C. Treat, Norwich, Conn.	1.00
James Quinn, So. Manchester, Conn.	1.00
City Drug Store, New Britain, Conn.	2.00
T. E, Varney, Dover, N. H.	1.00
A Friend, Holliston, Mass.	1.00
A Friend, Dorchester, Mass.	1.00
A Friend, Hopedale, Mass.	1.00
A Friend, Manchester, N. H.	1.00
Arthur Pickwell, Worcester, Mass.	5.00
William S. Nagle, Springfield, Mass.	1.00
H. E. Hayn, Springfield, Mass.	1.00
J. Henry Welch, Springfield, Mass.	1.00
J. W. Welchanty, Springfield, Mass.	2.00
J. H. Beanrias, Springfield, Mass.	1.00
P. A. Leighton, Springfield, Mass.	1.00
John D. Smith, Springfield, Mass.	2.00
A. W. S. Volley, Springfield, Mass.	2.00
F. N. Wheeler, Springfield, Mass.	2 00
M. L. Sadley, Springfield, Mass.	3.00
E. B. Hyde, Springfield, Mass.	1.00
Berger & Franz, New York City	2.00
Joseph Plaut, New York City	2.00
Van Buskirk's Pharmacy, Saugerties, N. Y.	2.00
Eugene L. Myer, Saugerties, N. Y.	1.00
C. E. Bigelow, New York City	10.00
Smith & Groen, Le Roy, N. Y.	1.00
C. E. Blodgett, Portland, Conn.	1.00
Thompsonville Drug Co., Thompsonville, Conn.	3.00
McNamaria Pharmacy, Collinsville, Conn.	1.00
E. J. Barden, Shelton, Conn.	5.00
R. H. Barnes, Windsor, Conn.	2.00
Victor Bugwell, Worcester, Mass.	5.00
Paul C. Klein. Boston, Mass.	5.00
Geo. H. Burkill, Spencer, Mass.	2 00
Geo. F. O'Connor, Holyoke, Mass.	2.00
Wm. H. Glover, Lawrence, Mass.	5.00
Ernest Dalton, Chicopee, Mass.	2.00
Albert E. Booth Co., Ludlow, Mass	1.00
D. M. Clancy, Indian Orchard, Mass.	1.00
Paul Mongeau, Indian Orchard, Mass.	1.00
Thomas H. Fox, Chicopee Falls, Mass.	1.00
L. W. Knight, Springfield, Mass.	1.00
J. Omer Guimond, M. D., Chicopee, Mass.	2.00
C. S. Browning, Ludlow, Mass.	1.00
D. F. Keefe, Springfield, Mass.	1.00
Edward G. Crothy, Westfield, Mass.	1.00
P. N. Hall, Westfield, Mass.	1.00
J. T. Monenie Co., Chicopee Falls, Mass.	1.00
John E. F. Jones, Bridgeport, Conn.	2.00
Jesse Wakemans, Bridgeport, Conn.	3.00
J. J. Swinnerton, Bridgeport, Conn.	1.00
W. A. Runyon, M. D., Bridgeport, Conn.	1.00
Ambrose Pharmacy, Bridgeport, Conn.	1.00
Kibhe's Pharmacy, Meriden, Conn.	1.00
N. P. Forcier, Meriden, Conn.	1.00
James N. Banziger, Torrington, Conn.	1.00
Stillman Pharmacy, Bridgeport, Conn.	1.00
Chas. A. Riccio, Bridgeport, Conn.	1.00
De Vorken's Pharmacy, Bridgeport, Conn.	1.00
W. E. Wright, Bridgeport, Conn.	1.00
Fickett's Drug Store, Bridgeport, Conn.	1.00
W. I. Nichols, Bridgeport, Conn.	2.00
Verrilli's Pharmacy, Bridgeport, Conn.	1.00
The Cannon Pharmacy, Bridgeport, Conn.	1.00
Burstein's Pharmacy, Bridgeport, Conn.	1.00
Broderick & Curtin, Meriden, Conn.	1.00
W. P. Hindle, Bridgeport, Conn.	5 00
O. H. Smith, Bridgeport, Conn.	2.00
Wm. J. Cody, Bridgeport, Conn.	1.00
James H. Walsh, Bridgeport, Conn.	2.00
Wm. B. Mosher, Meriden, Conn.	1.00
H. P. Pigeon, Meriden, Conn.	1 00
Willis Barber, Meriden, Conn.	1.00
F. P. Goodsell, Meriden, Conn.	1.00
C. A. Pelton, Middletown, Conn.	1.00
Howard & Lincoln, Middletown, Conn.	1.00
East End Drug Co., Waterbury, Conn.	1.00
T. L. Moriarty, Waterbury, Conn.	1.00
W. H. Pickett & Co., Waterbury, Conn.	1.00
Siracusa's Pharmacy, Waterbury, Conn.	1.00
Claxton's Pharmacy, Torrington, Conn.	2.00
C. D. Goodale, Torrington, Conn.	1.00
Buell & Blatchley, Middletown, Conn.	1.00
E. Caracciolo, New York City	1.00
Louis Steinburg, New York City	1.00
	$170.00
Total acknowledged to date	$1,549.00

JONATHAN W. PLUMMER

Jonathan W. Plummer, one of the founders of the old wholesale drug house of Morrisson, Plummer & Co., Chicago, died recently at the home of his son in Dixon, Ill.

Development of Post-Graduate Students*

By PROF. HENRY KRAEMER,

President of the American Conference of Pharmaceutical Faculties.

I DEEM it exceedingly fortunate, that the American Drug Manufacturers' Association, in making up your list of invitations, decided to invite the American Conference of Pharmaceutical Faculties to send delegates to attend your deliberations. When as President of the Conference of Faculties, I received the invitation of your Secretary to appoint a delegate to attend this your seventh annual meeting, I saw in between the lines something more than the mere perfunctory appointment by courtesy of one of my colleagues to act for the faculties, but a genuine desire on your part to afford us every facility to become thoroughly informed in what you are doing and to extend to us all the co-operation within your powers.

It seemed to me very urgent that I personally attend this meeting if I wished to keep informed upon the status of your present work and your outlook for the future. As I have learned of what some American drug manufacturers were doing in the line of research and how eager they were to secure investigators of the first rank and to encourage our university students to prolong their studies so as to become capable of initiative and resourcefulness in the drug industry I had to rub my eyes and wonder if I was dreaming.

This is not a mere coincidence. It marks the beginning of a new epoch in pharmacy. It means the coordination of the forces which shall fructify your investments, furnish opportunities for our university students and reduce to the minimum the waste in our educational work. The whole civilized world of industry looks to you—the American Drug Manufacturers' Association, and to the teachers in our universities to give direction to the science of medicine of this century. The dream of Doctor Prescott must come to fruition through us, as it is not possible unfortunately through the depletion of the resources and the man power of the other civilized nations. Doctor Prescott in 1900 said; "Science came out of Pharmacy in the last century, and it must return to it in the present." He referred to the contributions of science by that great galaxy of men in the last century who had been pharmacists.

As I have listened to your discussions and have followed the trend of other American industries, I know that it is your aim to attain and retain a permanent place among the manufacturers of medicinal products of the world. Apart from the development of our natural resources and your integrity of purpose this is dependent upon two other questions: the one involving a new construction of our economical relations with the rest of the world, and the other is an entirely new view point as to the paramount object of our educational institutions. The first of these problems can be left safely to your Committee on Legislation. To the second of these the American Conference of Pharmaceutical Faculties must give attention.

I am probably more familiar than any of you with the drawbacks that we have had in our educational work in pharmacy. Nearly all of the institutions teaching pharmacy have focused their efforts to the making of retail druggists and giving such instruction as would enable their graduates to secure licenses from the State Boards to run retail pharmacies. All of our discussions have been centering around the question as to whether pharmacy was a profession or a business. Whether the graduates should understand more about their profession or receive more instruction in the art of salesmanship. Now in my judgment this is not the main question. The question fortunately before this body is not how we are going to make professional pharmacists out of every one who shall run a drug store. The questions relating to the conduct of a retail pharmacy are in the hands of the State Boards and so long as the public are satisfied the way the average drug store is run and the owner does not transgress any of the state or national laws this condition will continue.

I am very much concerned with the future of the retail pharmacist but I think that all of our universities are more interested with the other and more vital question as it relates to the development of post graduate students who shall be able to create in the laboratories of the American manufacturers those products which shall represent their independence and give our firms names which are deserving of the respect not only of the physicians and pharmacists but of the public generally. American pharmacy today requires greater stimulation in the development of the science of pharmacy than even regards the character of professional standards for these are naturally evolved through the educational processes of our universities.

If there are those who feel that the college course is to make retail druggists let them continue until they see the inevitable trend that higher education in pharmacy in this country must take. Certainly the universities, where the college of pharmacy is a part of a great educational system can not afford to adjust their courses on a minimum educational basis to satisfy the appeal of the retail pharmicists who are in need of clerks. Our course at the universities is a very clear one and we must come before you year after year with our plans and our purposes. We must demonstrate that we are ready to train and equip the type of man who in your establishments will be the equal of the trained chemist, the engineer, or the architect, who carries the diploma of the university. We cannot think of producing large numbers of men of mediocre talents and ability but we must train a few men who have an unusually high order of capacity to serve you in making the pharmaceutical industries the equal of any of the other of our national industries.

It does not require much thought as we consider the permanency of institutions to come to the conclusion that (1) mankind will always require medicines; (2) that drug manufacturers will supply the remedies; and (3) the Universities must train the experts who are the backbone of our pharmaceutical industries. It is self-evident therefore that the men who are teaching the youth of our country, and are to take the places of your chemists and investigators, and assist you in continuing your establishments, ought to be practically conversant with the direction that the manufacturing industry in which you are engaged is developing. I am grateful to you for the encouragement I have received and for the message I can deliver to my colleagues of the American Conference of Pharmaceutical Faculties. The universities can not and must not fail you at this critical period in the world's history when mankind is looking to the properly trained men of our country for the means of prolonging and preserving life.

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*Portion of address delivered at the Seventh Annual Meeting of the American Drug Manufacturers' Association, New York, Feb. 6, 1918.

DRUG TRADE ROLL OF HONOR

In proportion to the number engaged in the profession, the drug trade has a right to feel proud of its members who have left the more peaceful walks of life and enrolled themselves in the active defense of their country. To them all honor is due, and in common with all citizens, The ERA feels grateful to them and takes pleasure in printing their names herewith, together with such other information as will show both their former connection with the trade and the grade and branch of the Government Service in which they are enrolled. We desire to make this "Roll of Honor" as complete as possible and to this end we invite the cooperation of all druggists. If any reader of The ERA knows of any one connected with the drug trade who has joined any branch of the United States military or naval forces in the war against Germany, he is requested to send such information to the Editor for publication in the ERA. We want the full name and address of the individual, his connection with pharmacy, when enlisted, and the branch of the service in which he may be engaged. Address Editor, The PHARMACEUTICAL ERA, No. 3 Park Place, New York.

MARTIN V. CORNICA, Garvey's Pharmacy, Prairie due Chien, Wis.; radio department, U. S. S. Rambler.

J. C. COX, The Cox Drug Store, Cawker City, Kansas; corporal, ammunition train.

LOUIS WILLIAM SIEG, William Sieg's pharmacy, 1572 14th ave., Rockford, Ill.; private, Co. 2, ordnance, 161 depot brigade, Camp Grant, Ill.

WILLIAM COOK, with Oliver & Drake Co., 134 Broad st., Elizabeth, N. J.; 8th base hospital, France.

FRED MORRIS, with Oliver & Drake Co., 134 Broad st., Elizabeth, N. J.; medical department, Regular Army.

J. C. BARKLEY, proprietor Barkley's Pharmacy, Fairfield, Idaho; regimental infirmary, 346th Field Artillery, Camp Lewis, Wash.

I. J. ANDERSON, Anderson's pharmacy, Freewater, Ore.; medical department, U. S. Army.

JOHN McMAHON, Pacific Coast representative of J. Hungerford Smith Co., Spokane, Wash.; Quartermaster's corps, Camp Joseph Johnston, Yukon, Fla.

J. E. TANNER, with Stewart & Holmes, Seattle, Wash.; yeoman, U. S. Navy.

RALPH GRAHAM, Stewart & Holmes, Seattle, Wash.; U. S. Navy.

EARL FONDA, Stewart & Holmes, Seattle, Wash.; U. S. Navy.

BERT McGEE, Stewart & Holmes, Seattle, Wash.; Coast Artillery.

A. B. HARRISON, Stewart & Holmes, Seattle, Wash.; Naval Training Station, Bremerton Navy Yard.

CHARLES GRAHAM, Huntley Drug Co., Oregon City, Ore.; Hospital corps.

WILLIAM HAMILTON, Huntley Drug Co., Oregon City, Ore.; Hospital corps.

WALTER LEISMAN, manager Huntley Drug Co., Canby, Ore.; Aviation corps.

EARL D. ARMSTRONG, with R. D. Austin, Cairo, N. Y.; medical corps, U. S. Army.

EDWARD PLAUT, vice-president Lehn & Fink, New York, 1st lieutenant, Sanitary Corps, Medical Department, U. S. Army.

ROBERT PLAUT, treasurer Lehn & Fink, New York, 1st class yeoman, cost accounting department, U. S. Naval Reserve.

CHARLES PETIT, with Lehn & Fink, Inc., New York, sergeant, U. S. Army.

G. V. WILLIAMS, Bowman's Drug Store, Inc., Fortuna, Cal., naval reserve.

The School of Pharmacy, University of Oklahoma, reports the following for the Roll of Honor:

MILLER THOMPSON, Ph. G. '16, 358th Infantry Infirmary, Camp Travis, Tex.

GEORGE B. SHOWN, Ph. G. '18, transferred to the 358th Infantry Infirmary, Camp Travis, Texas.

REUBEN M. BURROW, Ph. C. '14, medical detachment, Ft. Leavenworth, Kansas.

EUGENE L. SUTHERLAND, Ph. C. '14, is now in the medical detachment of the 340th Field Artillery, Camp Funston, Kansas.

HUBERT M. NICHOLSON, B. S. '12, M. D. (Johns Hopkins) '17, Lieutenant, Medical Officers Reserve Corps, temporarily released from active duty in order to finish his hospital internship at the Royal Victoria Hospital, Montreal, Can.

J. J. McCARTNEY, Ph. C. '01, Captain, U. S. R., Ft. Reno, Oklahoma.

FRANK B. PATTERSON, Ph. G. '19, has been transferred to the medical detachment of the 357th Infantry at Camp Travis, Texas.

WILLIAM WELDON, freshman, Great Lakes Training Station at Chicago.

CHESTER WARREN, freshman, training school at Great Lakes, Illinois

C. V. NICHOLS, instructor in pharmacy, Hospital Corps, U. S. A., Fort Sill, Okla.

CLAUDE AIKMAN, B. S. '17, 1st Lieutenant, U. S. R., at Camp Pike, Ark.

HOWARD S. CAIN, Ph. C. '14, Private Medical Department, 19th field artillery, Fort Sam Houston.

Names of alumni of the school not previously reported who are now in the service:

J. J. McCARTNEY, Ph. C. '01, Captain, U. S. R., Ft. Reno, Okla.

EARL JOHNSON, Ph. G., B. S. '17, Private, 9th Co. A. C., N. A., Ft. Rosecrans, San Diego, Cal.

GEO. L. RISEN, Ph. C. '13, Private, Field Hospital No. 143, Camp Bowie, Tex.

V. L. GLINES, ex. '18, Private, 10th Co. C. A. C., N. A., Ft. Rosecrans, San Diego, Cal.

A. C. SHULTZ, Ph. C., '12, Lieutenant, Kelly Field, San Antonio, Tex.

CHESTER WARREN, ex '19. Private, Main Hospital, Co. C., Great Lakes, Ill.

BRUCE EDWARDS, ex. '19, Private, Hospital Corps, Tr. School, Great Lakes, Ill.

WM. WELDEN, ex '19, Private, Hospital Corps, Tr. School, Great Lakes, Ill.

HUBERT STRAHAN, Private, E. H. No. 12, M. O. T. C., Ft. Riley, Kans.

WM. O. EADS, Ph. G. '16, Private, Camp E-1, Hosp. School, Barrack A, Great Lakes, Ill.

MILLER THOMPSON, Ph. G. '16, Private, 358th Inf. Infirmary, Camp Travis, Tex.

C. V. NICHOLS, Ph. C., B. S. '14, Private, Base Hospital, Barrack C, Camp Doniphan, Ft. Sill, Okla.

MACK WILLIAMS, Ph. G. '17, Private, address unknown.

JEROME COLE, Ph. G. '16, Private, Co. G. 357th Inf., Camp Travis, Tex.

CLARENCE KNAPPENBERGER, Ph. C. '13, Private, Hospital Corps, Ft. Logan, Colo.

THEO. N. COTTREL, Ph. C. '13, 30th Eng. Gas & Flame Service, A. E. F., Somewhere in France.

A. B. HAAS, Ph. C. '11, Private, Post Hospital, Ft. Sill, Okla.

J. D. HAAS, Ph. C. '11, Private, Co. E., 7th Eng., Ft. Leavenworth, Kans.

REUBEN G. LEWIS, Ph. C. '12, 2nd Lieutenant, Field Artillery, O. R. C., unassigned, A. E. F. via N. Y.

WILLIS GOREY, ex. '18, Private, address unknown.

IVAN L. BURGER, ex. '18, Aviator, address unknown.

The University of Illinois School of Pharmacy sends the Era the names of the following graduates and students for the drug trade roll of honor:

DR. CHARLES K. STULIK, '10, Lieutenant, Medical Corps, base hospital, Camp McArthur, Waco, Tex.

HOMER L. WHERLEY, '18, school for non-commissioned officers, Camp Greenleaf, Ft. Oglethorpe, Ga.

BURT WARD, '18, school for non-commissioned officers, Camp Greenleaf, Ft. Oglethorpe, Ga.

RALPH PARKHURST, '18, school for non-commissioned officers, Camp Greenleaf, Ft. Oglethorpe, Ga.

GEORGE SEDLACK, '18, pharmaceutical work, Jefferson Barracks.

LOUIS KAREL, '18 Jefferson Barracks.

JOHN R. ROBERTSON, '18, Jefferson Barracks.

DR. C. P. ECK, '10, 1st Lieutenant, Medical Reserve.

EDWIN J. BACKUS, '11, formerly with B. A. C. Hoelzer, Chicago, Medical Department, 131st Infantry, Camp Logan, Tex.

RALPH R. THOROMAN, Ph. C., '17, enlisted in the Navy, Camp Dewey, Great Lakes, Ill.

WM. HUHN, '18 Hospital Corps, Coast Artillery, Presidio Barracks, San Francisco, Cal.

THE QUESTION BOX

The "How to Do It" Department

CONDUCTED BY PHARMACEUTICAL EXPERTS

For the benefit of ERA Subscribers

Coating Pills With Stearic Acid

(F. A. C.)—Stearic acid has been recommended as a coating for the so-called "enteric pills," i. e., pills coated with substances that will not dissolve in the stomach, but dissolve in the intestines, but whether it has any advantages over salol, keratin, tolu or other substances occasionally employed for the purpose, is a mooted question. Salol is the substance most commonly used and frequently ordered as coating for enteric pills, but stearic acid answers the purpose satisfactorily. William G. Toplis, in a paper presented to the Pennsylvania Pharmaceutical Association two or three years ago, stated that the coating is best applied by dissolving the stearic acid in ether; placing the pills in a porcelain dish of ample size; pouring a little of the ethereal solution on the side of the dish, not on the pills; then rolling until nearly dry. The pills are then transferred to another dish and are rolled until smooth and hard, the operation being repeated until the pills are sufficiently and uniformly coated. Mr. Toplis states that experiments proved that the coating of stearic acid properly protected the pills when administered.

Theatrical Cold Cream

(Clerk)—Various formulas have been published under this title, the following formula being one given by Fenner:

Liquid paraffin (mineral glycerin), 12 ounces; dry stearin or white wax, 4 ounces; precipitated chalk, 1 ounce; zinc oxide, 1 ounce; rhodinol I, 30 minims. Melt the stearin or white wax with the liquid paraffin, and while cooling, incorporate the powders and perfume, stirring until cold. Other perfumes may be used if desired. To make a rose tinted product, add to each pound of the fore-mentioned cream 30 grains of carmine, first rubbed to a smooth paste with a portion, and then add the remainder, rubbing them well together.

A somewhat similar formula recommended for inclusion in the A. Ph. A. Recipe Book is: Spermaceti, 125 parts; white wax, 120 parts; liquid petrolatum, 560 parts; sodium borate, 5 parts; distilled water, 90 parts; to make 1,000 parts. Melt the spermaceti and wax, add the liquid petrolatum, and continue the heat until the mixture is uniform. Dissolve the sodium borate in the water and apply sufficient heat to bring this solution to the temperature of the oily solution. Add the aqueous solution all at once, to the oily solution and stir until congealed. During cold weather the quantity of liquid petrolatum may be slightly increased. Like the preceding, the cream may be perfumed as desired.

A so-called "make-up cream," recommended to remove grease paint and theatrical make-up from the skin, is the following: Fresh sweet lard, 10 ounces; castor oil, 4 ounces; spermaceti, 2 ounces, borax, 20 grains; water, 1½ ounces. Melt the spermaceti, add the lard, and then the castor oil. Dissolve the borax in the water; heat both solutions to about 150° F., and pour the aqueous solution into the mixture of fats, beating briskly until the product is nearly cold.

Grease Eradicator and Clothes Cleaner

(W. C. M.)—The Era Formulary contains a large number of formulas and methods for removing spots from clothing, the preparations used for such purposes being known under such names as grease eradicators, lightning cleaners, benzine jelly, benzine paste, oxgall cream, etc., the collection affording a formula of almost any type you may wish to select. The particular form of preparation desired, as also the cost of manufacture, are questions which the individual user must settle for himself. Here are a few formulas:

Grease Eradicator

Carbon tetrachloride	1 fl. ounce
Denatured alcohol	2 fl. ounces

Mix. A cotton cloth should be moistened with the liquid and the grease spot well rubbed and, while still moist, rubbed with a dry cloth.

Washing Fluid

Concentrated lye or caustic soda	1 pound
Oil of turpentine	2 ounces
Borax	2 ounces
Camphor	½ ounce
Soap bark, ground	¼ pound
Ammonia water	8 ounces
Water	sufficient

Steep the soap bark for 2 hours in ½ gallon of water, strain and press. Dissolve the concentrated lye and borax in ½ gallon of water and add to the decoction of soap bark. Dissolve the camphor in the oil of turpentine and add to the solution, then add the ammonia water and, after allowing the mixture to stand, pour off or strain; to use, add a tablespoonful of the solution to each gallon of water used for soaking the clothes before washing, and a little may be also used in the washing water.

Mercury in Powdered Form

(H. L. C.)—We find in an abstract in the Year Book of the A. Ph. A. for 1915 that a fine subdivision of mercury in powdered form for therapeutic application may be obtained by the method recommended by Unna, the product being called "Quecksilbergleitpuder" or "pulvis fluens hydrargyri." It is stated that if the mercury be rubbed up with 2, 4 or 9 times its weight of talcum powder and a little oil of turpentine, a mobile powder containing 33 1-3 per cent., 20 per cent. or 10 per cent. mercury may be obtained. The turpentine is added as an oxygen carrier to coat the mercury particles with a film of oxide which thus prevents their running together to form larger globules on standing. After trituration the powder is spread out to allow evaporation of the turpentine oil. The small amount of oil that has penetrated into the material slowly resinifies; its presence, it is stated, is beneficial than otherwise. The mercury powder resulting with talcum is gray; lycopodium may also be used as extinguishing medium, resulting in a yellowish powder. The "fluent powder" may be used for preparing any other mercury preparations (ointment, plaster, pills); it may also be used as a dusting powder in syphilis and skin affections and for destroying lice. Of course, mercury with chalk is a finely divided form of mercury, containing from 37 to 39 per cent. of metal extinguished by clarified honey, moist chalk being then added. When made according to the official requirements, the mercury globules should not be seen with a glass magnifying four diameters.

Remington states that the official process is a very tedious operation, and quotes Matter's method for preparing a mercurial powder, as follows: Fifty-three grains of powdered acacia are mixed with fifty-three grains of chalk, enough water added to form a thin paste, and 166 grains of mercury added and triturated until extinguished; 166 grains of chalk are made into a paste with water and added to it, and the water evaporated from the mixture in a waterbath; it is rubbed to a powder when dry.

Literature on the Sponge Industry

(T. F. H.)—The Era and other pharmaceutical journals have published many articles during the last twenty years on the sponge industry, but information on the subject is widely distributed through publications and books pertaining to various fields of investigation and industry. Literature which can be profitably consulted, at least in so far as the Florida sponge industry is concerned, is that issued by the United States Commission of Fish and Fisheries, Washington, D. C., bulletins of which probably can be obtained through the Superintendent of Public Documents, Washington. Possibly one of the best is that by John N. Cobb on "The Sponge Fishery of Florida," which appears as part of the annual report of the Commissioner of Fish and Fisheries, published in 1904. This article covered the subject very thoroughly up to the date of publication, giving a history of the sponge industry, methods of culture, harvesting, grading, buying at the grounds, baling, general commercial information, etc., most of which is as opportune today as it was when first written. Other bulletins published by the Department are "Sponge Culture," by John Cotte, 1910 (contains a bibliography); "Commercial Sponges and Sponge Fisheries, 1910," by H. F. Moore; and "Fresh Water Sponges Collected in the Philippines by the Albatross Expedition, 1909."

For information concerning the foreign sponge industry, you can consult a file of the United States Consular Reports, published by the Department of Commerce during the last ten years. A file of this publication can be found in almost any public library, and the information given covers almost every angle of the industry. Under the present tariff act, sponges not advanced in value by chemical processes are dutiable at 10 per cent.; under the former tariff act the duty was 20 per cent.; sponges advanced in value by processes involving chemical operations, manufactures of sponges or of which sponge is the component material of chief value, the duty is 15 per cent.; under the former law the rate was 30 per cent. Data relating to the value of sponges imported and domestic sponges exported may be found in the bulletin of the Bureau of Statistics, Department of Commerce. For years the value of sponges imported has greatly exceeded that of those exported. We have no recent estimates on the value of the domestic production consumed in this country.

Making Gelatin Capsules

(W. S.)—To overcome the tendency of gelatin capsules to adhere to the moulds upon which they have been formed, you should first wipe off the forms with a cloth saturated with almond or olive oil before dipping them into the gelatin mixture. This keeps the film of gelatin from adhering to the forms. We know of no book which is wholly devoted to the subject of capsule making, although quite full descriptions of the methods followed are given in most works on practical pharmacy, while special articles on the subject are to be found scattered through pharmaceutical literature. As a general proposition, the pharmacist cannot compete on an industrial scale with large manufacturers in making capsules. Specialization and the use of expensive and complicated machinery in manufacturing have made it possible for the manufacturer to turn out capsules in enormous quantities at a low cost and a rate of speed which cannot otherwise be attained.

However, if you want to try a standard formula on a small scale the following is recommended, being taken from the British Pharmaceutical Codex and stated to yield a mass for flexible capsules, which is suitable for all ordinary purposes:

Gelatin, in thin sheets	4 ounces
Syrup, by weight	1 oz. 73 grains
Glycerin, by weight	4 ounces
Mucilage of gum acacia	1 ounce
Distilled water	7½ fl. ounces

Mix the syrup, glycerin, mucilage and water, and soak the gelatin in the mixture; when the gelatin has become uniformly soft, melt on a water-bath. If a softer capsule be required, the mucilage of acacia may be replaced by syrup, glycerin or water, or by mixtures of these ingredients, according to the degree of hardness required.

Capsules moulds are usually oval in shape, and may be made of tin, brass or aluminum. The stems of the moulds are about 5 centimeters (2 inches) long, and are fixed to one side of a square, wooden or metal carrier; to the center of the other side of the carrier is fixed a stout handle. The sizes of the capsules in common use are 2, 3, 6, 9, 12, 18, 35 and 53 decimils (3, 5, 10, 15, 20, 30, 60 and 90 minims,) and it is convenient to have all the moulds on each carrier of the same size. In making the capsules, the mass is brought to a suitable consistence on a waterbath (if too hot the capsules will be too thin, and if too cold they will be unnecessarily thick), and the surface layer, if necessary, is removed or drawn to one side; the moulds are then wiped with a piece of cloth permeated with almond or olive oil, and dipped into the melted mass till they are well under the surface. They are then slowly withdrawn and rotated until the gelatin sets. When cold the capsules are drawn from the moulds with the fingers, and are then trimmed with a knife or scissors so as to leave a short length of neck.

Formulas for Fertilizers

(W. F. S.)—The formula you submit for a fertilizer for house plants is similar to that given in most formularies, being constructed on the theory that it contains elements or compounds which contribute directly to the growth and substance of the plant. In this respect the completed mixture contains ammonia (also available nitrogen in the form of nitrates), phosphoric acid and potassium compounds. As all approved commercial fertilizers owe their value to the kind and amount of these materials they contain, any change you might make in your formula would be in the choice of the compounds furnishing such "plant food." If you desire to make use of the element potassium, some compound or salt of that element must be employed in making the mixture. The "crude stock" furnishing "potash" may be in the form of chloride, kainit (containing both chloride and sulphate); double manure salt, the double sulphate of potash and magnesia, and some of the less important salts, as carnalite, krugite, etc., or carbonate as found in wood ashes. Potassium in organic combination is found in tobacco stems, cottonseed meal, etc., while the valuable nitrate form exists as potassium nitrate. You can, of course, employ sodium nitrate as a source of available nitrogen, but in substituting it for potassium nitrate no provision is made for a supply of potash.

From a study of the formula it would appear that if you want potash in the mixture, potassium nitrate would be the most practicable salt to employ, as it is one of the most common commercial forms, and although high-priced at the present time, it has the additional advantage of furnishing nitrogen in available form for plant growth. Such a discussion is somewhat outside of the work of the pharmaceutical chemist and properly belongs to the work of the scientific agriculturist. For this reason you should be able to obtain some valuable information of a practical character by taking the subject up with your State Experiment Station authorities. From the reference works at our command we take the following formulas for fertilizers required by amateur gardeners, and which may be put in package form:

(1)

Potassium nitrate	1 pound
Calcium nitrate	4¼ pounds
Magnesium sulphate	12½ ounces
Potassium phosphate	14 ounces
Ferrous phosphate	5 ounces

Mix. One teaspoonful to be dissolved in a quart of water, and the plants sprinkled daily with the solution.

(2)

Sodium chloride	2 pounds
Potassium nitrate	1 pound
Magnesium sulphate	1 pound
Sodium phosphate	4 pounds

Mix. One teaspoonful to be dissolved in a quart of water, and the plants sprinkled daily with the solution.

(3)

Ammonium phosphate	300 parts
Sodium nitrate	250 parts
Potassium nitrate	250 parts
Ammonium sulphate	200 parts

Mix. To every liter of water add 2 grams of the mixture, dissolve, and sprinkle the potted plants once a week with the solution.

The following generalizations are given. When plants want nitrogen the leaves are said to lose their normal green color and take on a clear green or a yellowish one, and to dry finally with a clear brownish-yellow color. When phosphoric acid is deficient, the leaves take on a deep clear green, almost blue green. With a greater scarcity there appear on the leaves, first at the margin, and later on the whole leaf, dark spots, and the leaf dries with a dark-brown to a black-green color. A scarcity of potash is said to be coincident with spotted leaves, the spots appearing in the margin, and later becoming distributed over the whole leaf, the stalk, midrib and veins retaining their green color. The leaf also curves or curls, with its convex side upwards, and easily dries up.

Sodium Bicarbonate With Tincture of Iron

(H. B.)—Sends the following prescription, asking what reaction takes place when the same is compounded, and also, to write the equation for the reaction:

Sodium bicarbonate	2 drams
Ammonium chloride	1 dram
Tincture of ferric chloride	1 ounce
Simple syrup, q. s. to make	4 ounces

Mix. One teaspoonful every four hours.

Ferric salts are precipitated from their aqueous solutions by alkali carbonates and bicarbonates, the precipitate being a red brown ferric hydroxide, the reaction most likely to take place in the above mixture being represented by the following equation:

$$Fe_2Cl_6+6NaHCO_3=Fe_2(OH)_6+6NaCl+6CO_2$$

The reaction is more or less prevented by the presence of sugar, as in the syrup used in the above, but the change gradually develops on allowing the mixture to stand, the precipitate being of a somewhat basic character and variable from $Fe_2(OH)_6$ to $Fe_2O_2(OH)_2$, insoluble in alkalies and ammonium salts. The CO_2 is evolved as a gas.

Answering your other question, the addition of acacia to the prescription is not advised, as the alcohol of the tincture precipitates and ferric chloride gelatinizes acacia when they are brought together. This gelatinous mass, however, would tend to dissolve in the syrup on standing. The addition of quinine sulphate would be also unsatisfactory and serve to increase the incompatibility, while Fowler's solution added to the above mixture would be decomposed by the acid of the tincture, while the arsenous acid would combine more or less completely with the ferric hydroxide, forming an insoluble iron arseniate, this reaction, of course, depending on the order in which the various substances are put together. We do not think this formula, which you say "is intended for a cough mixture," can be changed to "a malarial tonic containing iron, quinine, strychnine and arsenic without changing the color," whatever that may mean.

If you or your physician wishes to use a mixture containing iron, quinine, strychnine and arsenic, why not try a combination in the form of an elixir like the following, taken from the formulary of the New York Hospital:

Tincture of iron citro-chloride	2 fl. ounces
Quinine sulphate	128 grains
Strychnine sulphate	1 grain
Sodium arsenate, exsiccated	1¼ grains
Alcohol	4 fl. drams

Mix all but the tincture of iron citro-chloride; dissolve by agitation, then add the tincture, and filter.

The sodium arsenate should be thoroughly exsiccated, although a perfectly crystallized form of the salt may be used if it shows no trace of efflorescence. In this case, 1¾ grains of the crystallized salt should be employed in place of 1¼ grains of the dried salt. Each fluid dram of the finished elixir will contain 7½ minims of tincture of iron, 1 grain of quinine sulphate, 1-128th grain of strychnine sulphate, and 1-100th grain of sodium arsenate.

In the will left by the late Prof. Joseph P. Remington, former dean, is a bequest to the Philadelphia College of Pharmacy of $10,000 in trust, the income of which is to be used for the support of worthy students. Prof. Remington's estate was valued at $189,474. Among his other bequests was the transfer of the Longport church property to the congregation.

New Books for Pharmacists

REAGENTS AND REACTIONS. By Edgardo Tognoli, M. D., professor in the University of Modena. Translated by C. Ainsworth Mitchell, B. A., F. I. C., 4½ x 6½ inches, 228 pages, cloth, $2. Philadelphia, P. Blakiston's Son & Co.

Books containing lists of reactions and reagents under their author's names are not new to chemical literature, but this volume has to its credit the fact that it is brought up to date and, besides the main list under authors' names, contains a short description of the tests of purity of the more important reagents. The list of reagents and tests reproduced represent most every field in which the chemist is called upon to work, being particularly rich in the number relating to organic analysis. There is also a chapter on test papers for acids and bases and papers for special tests; and various tables relating to atomic weights, specific gravities of various solutions and other mathematical data likely to be of service to the analytical chemist. As a handy reference book for pharmacists who do some analytical work the information so systematically arranged in this volume will quickly answer many troublesome questions at a moment's notice.

TREATISE ON APPLIED ANALYTICAL CHEMISTRY; methods and standards for the chemical analysis of the principal industrial and food products. By Professor Vittorio Villavecchia, director of the chemical laboratories of the Italian Customs. With the collaboration of G. Fabris, G. Rossi, R. Belasio, A. Bianchi, G Silvestri, F. Barboni, G. Armani, G Bosci and A. Cappelli. Translated by Thomas H. Pope, B. Sc., A. C. G. I., F. L. C., University of Birmingham. Vol. I. 10 x 6½ inches, 475 pages, cl. $6. Philadelphia, P. Blakiston's Son & Co.

An examination of this volume serves to emphasise the important part chemistry plays in all of the activities of modern life, especially when the purchase of raw materials, the control of manufacturing processes and the determination of the value, impurities and adulterations of finished products are subjected to the tests of the skilled analyst. In this book the author states that the methods followed in industrial and commercial analyses are applications of general, analytical and physical chemistry to special cases; in some instances they are less rigorous than, and do not attain the precision of, scientific methods, while in others the accuracy is that of the most scientific investigations. Of course, numerous methods are given in literature for the examination of any particular material, but without preliminary trial the analyst, especially in a new field, cannot always decide easily which procedure will answer his purpose.

For this reason certain States have recognized the necessity of issuing official standards to be attained in the analysis of various commodities of general interest, while in commercial and industrial circles the custom is growing of fixing beforehand the analytical methods serving as a basis for the evaluation of the products to be dealt in. It is in this direction that this work proceeds, and the methods and results described are largely those obtained from a long experience in the Laboratories of the Italian Customs Department. Prof. Villavecchia tells us that the methods have been repeatedly tried and many of them have been carried out and studied almost daily by specialists in their respective fields who have collaborated with him in the preparation of the work.

This treatise is divided into two volumes. Volume I before us deals with the analysis of potable waters, chemical products, fertilizers, cement materials, metals and alloys, fuels, tar and its derivatives, mineral oils and fatty substances, and the industrial products derived therefrom. For each product considered a brief statement is first made of the different cases and the analytical problems commonly presenting themselves, as well as of the investigations and determinations to be made to solve them. Detailed descriptions are then given of the methods to be followed. Sometimes methods for groups of allied substances, to which they are applicable in general, are collected in one and the same sub-chapter. An important feature is the giving of criteria and standards by the aid of which the industrial, commercial or hygienic value of the product may be ascertained from the analytical data obtained. Similar treatment is outlined for the second volume, and this treatise as a whole, may confidently be taken as representing the vast field of modern industrial development directly under the purview of the analytical chemist, as well as the scientific and practical methods of his art and work.

THE EXAMINATION OF MILK FOR PUBLIC HEALTH PURPOSES. By Joseph Race, F. I. C., city bacteriologist and food examiner, Ottawa; chairman of committee on standard methods of analysis, Canadian Public Health Association, etc. 8 x 6 inches, 224 pages, cloth, $1.75 net. New York, John Wiley & Sons, Inc.

This volume is primarily intended as a practical handbook for those engaged in the chemical and bacteriological examination of milk for public health purposes, recognition being taken of the fact that modern conditions require the assistance of both the chemist and the bacteriologist to determine the character of a given sample of milk. The scope of the work is reflected in the following chapter headings: Constituents of milk; normal composition of milk; chemical examination; bacteria in milk; the enumeration of bacteria in milk; excremental organisms; pathogenic organisms; cells, dirt and debris; miscellaneous information relating to pasteurized and heated milk, effect of heat on cream line, peroxidases, reductose, albumin, and rennin coagulation, fermentation test, collection of samples, recording results, etc. An appendix gives the composition of special media and a number of useful tables. The bacteriological section of this book indicates the trend of modern methods in the examination of milk, while the author shows by his work the pains he has taken to bring the best methods into practice. In presenting the tables of bacteriological results he expresses the hope that they will lead to standardization of records.

WILEY'S HEALTH SERIES: Nutrition, Hygiene, Physiology. By Harvey W. Wiley, M. D., formerly chief chemist of the United States Department of Agriculture; editor of Good Housekeeping's bureau of foods, sanitation and health, etc. Illustrated by B. F. Williamson and Ned Hadley. 3 volumes, 12 mo., cloth. 45c each. Chicago and New York, Rand McNally & Co.

These three volumes present in new form the author's "health reader," published in 1916, and represent his effort to make the study of physiology in the schools interesting to the average pupil. He does this by putting the material relating to anatomy, physiology and hygiene into a form so that the child naturally absorbs it, answering the question the child asks about the fire, the water he drinks, the crops producing food, the function of water in health, foods, digestion, and other questions relating to the development of growth. The author's treatment of the subject is a radical departure from that followed in the textbooks of a quarter of a century ago.

The Progress of Pharmacy

Picric Acid for Dressing Wounds—

A 1 per cent. aqueous solution of trinitrophenol (usually designated as picric acid solution) forms a convenient test for alkaloids, nearly all of which are precipitated from their diluted acidulated solutions, except aconitine, caffeine, cacaine, coniine, hyoscyamine, morphine and theobromine. Such a solution has also been effectively applied after cleansing the surfaces by saturating cloths as a dressing to burned areas, its use in this direction as an antiseptic in war surgery being extended on the Western Front, where it is used by British Army surgeons in 1 per cent. solution for dressing superficial wounds, for syringing suppurating sinuses and fractures and crushed tissues. It is said to kill bacteria without a corroding effect, prevents suppuration, stimulates granulation of tissues, has marked anodyne properties, is less irritating and more efficacious than iodine, and may be used for sterilization of the skin in surgical cases. Its use is also said to shorten the convalescent period.

Elixir of Phosphates of Iron, Quinine and Strychnine—

The elixir under this title was dropped from the last revisions of both U. S. P. and N. F. and having had a large call for it in his prescription business, W. H. Glover, of Lawrence, Mass., developed the following formula which he presented at the 1917 meeting of the A. Ph. A. as one he had found very satisfactory:

Soluble ferric phosphate	17.500 gm.
Quinine	8.750 gm.
Strychnine	.275 gm.
Phosphoric acid, U. S. P.	2.000 mils
Ammonium carbonate	5.100 gm.
Alcohol	60.000 mils
Acetic acid, U. S. P.	16.000 mils
Distilled water	
Aromatic elixir, of each	q. s.
to make	1000.000 mils

Dissolve the quinine and strychnine in the alcohol, then add the phosphoric acid previously mixed with 350 mils of aromatic elixir. Add acetic acid to ammonium carbonate in the flask and do not neutralize; add to the solution of alkaloids. Dissolve the soluble ferric phosphate in 30 mils of distilled water and do not neutralize, add 250 mils of aromatic elixir, add this to above solution and after 24 hours filter. By using the aromatic elixir warm, no precipitate is formed when solution of ferric phosphate is added to the solution of alkaloids. This precipitate is very slow to dissolve when the mixture is cold. Finally, add aromatic elixir to make 1000 mils. This product darkens with age, but by making preparations like this often and in quantity that obviates the necessity of long keeping, the indicated trouble will be avoided.

Wool Fat Substitute for Pharmaceutical Uses—

The limited supply of wool fat and consequent high prices have caused increased interest in the question of suitable substitutes for this product in pharmaceutical compounding. Axelrad (*Jour. Am. Ph. A.*) in an investigation of the subject, comes to the conclusion that the use of cetyl alcohol is advantageous in a substitute for wool fat, which he obtains by the distillation of the calcium soap of spermaceti. With the cetyl alcohol various mixtures were made having different quantities of base, lanolin and water in combination. The formula finally selected as being best for pharmaceutical compounding consisted of 70 parts petrolatum,. 20 parts paraffin (m.p. about 60° C.), 10 parts cetyl alcohol, 5 parts lanolin (anhydrous), 100 parts water. This preparation stood in the laboratory for 17 months with absolutely no change in appearance or working qualities, while the properties of taking up solutions of salts, powders, etc., were found to be the same as wool fat. The lanolin is added to give the mixture the unctuousness of wool fat, although this is a minor physical property. By adding 250 parts of water instead of 100, as given in the formula, a very satisfactory cold cream is produced. Considerable care in mixing is necessary. The petrolatum, cetyl alcohol, lanolin and paraffin are melted together. The water should then be warmed to the same temperature as the melted fats and added slowly with constant grinding to produce a smooth mixture.

Tannoxyl—

This compound, recommended as an intestinal astringent in the treatment of dysentery, diarrhea and other infections of the intestinal tract, occurs as a brownish yellow powder, is odorless, and not readily soluble in water or alcohol. It is said to be a combination of tannic acid with oxychlorcasein, and is given in doses of 1 to 3 grams.

Tests for Foreign Oils in Castor Oil—

The acetyl value is capable of indicating the presence of 1 to 2% of foreign oils in castor oil, but the other constants are of little value for the purpose. In the special case of castor oil adulterated with arachis oil the solidification point and the solubility in alcohol are the most sensitive tests (limit, 5%). For smaller amounts of arachis oil the turbidity temperature of the alcoholic solution may be determined. A solution of 1 vol. of pure castor oil in 95% alcohol remains clear when chilled below —20° C.; but in the presence of arachis oil the solution becomes turbid at temperatures ranging from + 5° or +6° C. for 5% to —2° or 3° C. for 2% for arachis oil. An alcoholic solution of castor oil containing 1% of arachis oil becomes opalescent at —4° to —5° C. and turbid at —9° C.

Foreign oils may be separated from castor oil by shaking 20 c.c. of the sample with 80 c.c. of petroleum spirit of b pt. 35° to 70° C. in a stoppered graduated cylinder. After settling, the volume of the lower layer containing the castor oil will show an increase of about 11 to 12 c.c. if the oil is pure, or more if foreign oils are present. On evaporating 50 c.c. of the petroleum spirit layer a residue is left, which in the case of 12 samples of pure castor oil ranged from 8.35 to 8.70% of the original oil. Mixtures containing from 30 to 1% of arachis oil gave residues ranging from 38.61 to 10.04% and by deducting from these the average value for pure castor oil (8.52%), the results agreed closely with theory. The method also effects a concentration of the arachis oil, which facilitates the detection of arachidic acid by Bellier's method. For example, the petroleum spirit extract from castor oil containing 5% of arachis oil will contain 36.7% of that oil. (Ann. Chim. Analyt., through *Jour. Soc. Chem. Ind.*)

The Cardamom Industry in South India—

Some interesting information relating to the cultural and drying methods employed in the cardamom industry are given by the planting expert of the Agricultural Department of Madras to the United States consul at Madras from which the following facts are taken: The cardamom is the fruit of a perennial herb, with thick, fleshy rhizomes and erect, leafy stems 4 to 8 feet in height, and long, branched inflorescences, which arise near the ground. The plant is indigenous in West and South India, in the rich, moist forests of Canara, Mysore, Coorg, Wynaad, Travancore and Cochin. In these districts it is cultivated to a large extent by both native growers and Europeans. It is difficult to say what the total acreage under this crop is in South India, but of recent years, with an improvement in prices, large areas have been planted up, and some of the tea and rubber estates have also considerable areas under cardamoms, and there are big estates where nothing else is grown in the Anamalais and Malabar, while many of the coffee estates of Coorg and Mysore cultivate cardamoms in the gullies and ravines.

Two species are grown, the Malabar cardamom, with prostrate fruit-bearing stems and a small pod, and the Mysore cardamom, with upright fruit-bearing stems and a large pod. The crop is grown in ravines and damp, shady places, and on the floor of the jungles after the undergrowth has been removed. Very little cultivation is done, and no manures are applied. The plants bear in their second year from planting out of the nurseries where they are raised from seed, and after a time they are thinned out and replanted.

The cardamom flowers in April and May, and the fruits are gathered in September and October. When ripe they are broken from the scape with a stalk attached so as not to split the pod. They are dried in the shade, graded, and sold. A few planters complete the process of drying artificially in hot-air chambers, and others bleach the pods with sulphur fumes and produce the very best varieties. This latter process, however, involves a lot of trouble, and it is usual to market the pods in the dry and unbleached condition. There is a large demand for cardamoms in India as a spice, while in England and Germany they are used in the manufacture of medicines and in North Europe as a spice for flavoring cakes and in the preparation of liquors. The essential oil extracted from the seeds is used in perfumery in France and America. The demand, and consequently price, is variable, but of late years both have advanced considerably, and many new areas have been put under cardamom cultivation.

Russian Mustard Seed—

Recently obtained figures place the production of mustard seed in Russia at 35,700 tons in 1916, and 44,700 tons in 1917. About 70 per cent. of the production is taken for mustard seed oil, 10 per cent. for making the ethereal oil, and 19 per cent. is used in the manufacture of ground mustard (*Farina sinapis*). The remaining 1 per cent. is sold by pharmacists under the name of mustard seed (*Semina sinapis*).

Cresol as a Precipitant of Alkaloids—

Cresol in the proportion of 0.3 per cent., acts like an alkali and liberates alkaloids. If insufficient water is present to keep the liberated alkaloid in solution, it comes down as a precipitate. Vanderkleed and E'we (Proceedings of the Pa. Assoc., 1917) report that the alkaloidal solutions tried with this substance were those of quinine hydrochloride, dihydrochloride and sulphate, strychnine sulphate, narcophin, morphine hydrochloride, morphine diacetyl hydrochloride, and codeine sulphate and that this reaction is important in regard to the application of cresol to the preservation of ampul solutions of an alkaloidal nature.

Pink Coloration of Sodium Hypochlorite—

Commercial calcium hypochlorite occasionally yields a pink-colored solution when used for the manufacture of solution of sodium hypochlorite. The pink color is due to traces of manganese salts in the calcium hypochlorite which are oxidized to the permanganate stage and thus color the solution pink.

Castor Oil Cultivation—

The increased demand for castor oil has renewed interest in the castor oil plant and many governments besides our own are perfecting plans in its cultivation. Besides the oil, the plants grown in tropical countries furnish a useful temporary shade for young cocoa and coconut trees, while the cake left after the expression of the oil is a valuable fertilizer. According to a recent consular report, it is stated that seeds of the plant yield up to 58 per cent. of oil. In Algeria, where the plant grows wild and its cultivation is greatly encouraged, oil is said to be extracted from the leaves as well. By boiling with a little sugar and powdered alum it can be rendered edible and free from its purgative properties; and besides being used for certain arts—soap making, harness and machine greasing, etc.—it is frequently made to replace advantageously other burning and lamp oils. Sebacic acid, which is even superior to stearic acid in the manufacture of candles, can also be extracted from castor oil; as well as caprylic acid, which can be used for lighting purposes, for the composition of varnishes, or in the manufacture of ethers used by perfumers and confectioners.

Wine Lees and Argols—

Some interesting facts relating to the production of these natural tartar compounds are given in a report to the Bureau of Foreign and Domestic Commerce by Consul Louis P. Dreyfus, Jr., of Malaga, Spain. Both compounds are by-products obtained from the manufacture of wine. During the fermentation of grape juice the calcium and potassium tartrates present in the juice are precipitated out, together with a quantity of organic coloring matter, forming the argols or lees. After purification these products are treated with chalk and calcium sulphate to convert them into calcium tartrate, which, when decomposed with sulphuric acid, yields free tartaric acid. Wine lees and argols are also used in making pure cream of tartar, potassium carbonate, black flux, etc., as well as in dyeing and in calico printing.

As stated, wine lees are a by-product of the process of making wine. After the new wine is pressed from the grapes the leavings are washed with turbid wines unfit for consumption or simply with pure water. The washing is done in a tub, the bottom of which is of closely woven metallic screen. The juicy mass that passes through the screen is placed in cloth sacks, which are strongly tied and placed in a press. The juice that is pressed out serves to wash new leavings. When the sacks have been well pressed they contain a muddy substance, which is broken into pieces and dried carefully in the sun. When perfectly dry the wine lees are ready for use.

Crude tartar (also called argol) is an aciduous salt obtained in the fermentation of new wine. It is deposited on the sides of the casks, forming a very brilliant coating which can be removed every two or three years from the barrels. The longer barrels remain without being scraped the thicker will be the coating of natural tartar.

Tartar is also extracted from the grape pulp that is discarded from the wine press. The lees are first taken from the pulp or leavings. Then they are distilled to remove the alcohol, which is low grade but can be rectified and brought to 95° or 96°. After the removal of the alcohol the residues are boiled and then allowed to cool and settle in wooden troughs. A sediment forms on the bottom and sides of the trough. After four or six days the water is drawn off and the sediment is scraped off with an iron shovel and allowed to dry. This is called the grape-pulp tartar and has the same strength as the natural tartar.

Credit and Commercial Case Decisions

By GEORGE H. MURDOCK, Newark, N. J.

General and Department Managers.—A corporation, though having a general manager, can vest in another agent the powers of a general manager representing it in the conduct of some department of its business; he standing in the same relation to the matters of his department as does the general manager to its general affairs.—165 P. (Cal.) 716.

Notary's Liability for Mistake.—A notary's liability to a buyer of land for mistake in certifying to the identity of a person acknowledging a deed is greater than that of an indemnitor, and recovery can be had against the notary without showing reason for not suing the party who impersonated another in making the acknowledgment.—195 S. W. (Tex.) 911.

Retirement of Partner.—Though a member retired from a partnership and assigned his interest, the surviving member has a right to use his name for the purpose of maintaining necessary actions, to close up the joint business, and enforce the rights of the old partnership, and the retiring partner was a proper party plaintiff in any action so brought.—195 S. W. (Ark.) 680.

Physician's False Answers in Application for Life Insurance.—If an applicant for life insurance makes truthful statements to medical examiner, who, without applicant's knowledge, changes answers to questions in application to make it appear that insured is a safe risk, insurer will be liable on the policy issued in consequence of the deceit of its agent.—165 P. (Ore.) 675.

Mortgagor's Agreement to Pay Premiums.—A fire insurance policy's mortgage clause making the policy payable to the mortgagee, as its interest may appear, provided that, if the mortgagor fails to pay the premiums, the mortgagee shall pay them, is not an absolute agreement on the mortgagee's part to pay the premiums, but merely makes such payment a condition to its recovery on the policy.—100 A. (R. I.) 1010.

Creation of Partnership—The consent of all the parties is essential to create a partnership.—163 N. W. (Mich.) 875.

Stockholders' Right to Inspect Books—A stockholder has the right to inspect the books of the corporation at a proper time for proper purposes.—101 A. (Del.) 433.

Renewal of Invalid Notes—Where original notes were affected with illegality, their renewal was subject to the same invalidating consequences.—76 So. (Ala.) 281.

Loss Due to Negligence—It is a maxim of jurisprudence, when one of two innocent persons must suffer by the act of a third, he by whose negligence it happened must be the sufferer.—163 N. W. (N. D.) 834.

Liability of Innkeeper—The innkeeper is liable for the goods of his guest, lost in the inn, unless the loss was due to the act of God, to that of a public enemy, or to that of the owner.—76 So. (Ala.) 302.

Tenant's Right to Remove Trade Fixtures—A tenant has a right to remove trade fixtures, but he must do so while still in possession under his lease, unless the time for doing so has been extended.—163 N. W. (Mich.) 917.

Renouncing Allegiance to Former Government—An applicant for naturalization must without reservation absolutely and forever renounce allegiance to his former government, and no divided allegiance is tolerated by the law.—242 F. (U. S.) 739.

Threat to Sue as Duress—Where debtor, executing a note, admitted the indebtedness, assertion by creditor of a positive intention to resort to legal proceedings if the debt was not immediately paid was not "duress" in law.—166 N. Y. S. 393.

Goods Injured in Transit—Where goods had been injured in transit, that consignee inspected the goods at their destination did not constitute an acceptance making a good delivery placing title in consignee, so as to require it to sue for their damage.—163 N. W. (Mich.) 934.

Transportation Beyond Destination—After the goods have reached their original destination the undertaking of the carrier so far as transportation is concerned is at an end, and any new obligation on its part to deliver at a different point must arise out of a new and different contract.—76 So. (Ala.) 309.

Foreclosure of Chattel Mortgage—A chattel mortgagee, selling at private sale as authorized by the mortgage, is under duty to carefully guard the mortgagors' interest, and to sell at the best price obtainable with reasonable diligence, as the mortgagee is trustee for the mortgagors, and must be held at a strict accounting.—196 S. W. (Mo.) 1075.

Customs and Usages—A custom, although universal in a particular locality, which contravenes a positive statute, is invalid, and does not become part of a contract. Where a local custom contravenes a positive statute, before it can become part of a contract, it must appear that the party sought to be bound by it expressly agreed to waive his rights under the statute. —93 S. E. (Ga.) 157.

Signing Contract Unread—One who signs an instrument written by the opposite party at interest therein, without reading it, when he is capable of doing so, cannot afterwards set up fraud in the procurement of his signature thereto, when no trick or artifice was resorted to for the purpose of inducing him to thus sign it, and it was not signed under any emergency requiring haste in its execution.—93 S. E. (Ga.) 233.

Employee's Fidelity Bond—When an employer has knowledge of previous dishonesty of an employee and accepts the assurance of an indemnitor of the employee's future fidelity without disclosing such knowledge to the innocent indemnitor, a fraud is committed against the indemnitor, and he is not bound, but this doctrine is predicated of knowledge only, and not upon failure or omission to gain knowledge since notice is not the equivalent of knowledge.—76 So. (Ala.) 103.

Retention of Check Not Accord and Satisfaction—Where defendant agreed to purchase merchandise at a fixed price, and it was delivered to and retained by him, so that he became indebted for the price, but he claimed a set-off for defect in quality of some of the goods, and undertook to deduct the amount from the price, sending plaintiffs a check for the sum which was admittedly due in any event, and writing that he was sending it as full payment, plaintiff's retention of the check did not constitute an accord and satisfaction. —166 N. Y. S. 175.

Professional & Trade Associations

MINNESOTA'S MID-WINTER MEETING

At the mid-winter meeting of the Minnesota Pharmaceutical Association held in Minneapolis on Feb. 8, the association went on record indorsing the bill in Congress for the establishment of a pharmaceutical corps in the Army; urged the passage of the pre-requisite measure which was defeated in the Minnesota legislature last year, and favored the passage of an anti-peddler's law. A permanent committee of the association was formed to work with the Minnesota State Board of Health in preventing the spread of venereal disease in the state.

The names of W. A. Abbott, Duluth; R. J. Messing, St. Paul; John Nelson, Ortonville; C. H. Huhn and Hugo Peterson, Minneapolis, were selected to be recommended to the Governor for appointment of a member of the State Board of Pharmacy.

The following officers were elected: President, John T. Johnson, Fergus Falls; 1st vice-president, Donald Robertson, Argyle; 2nd vice-president, K. D. Olson, Harmony; 3rd vice-president Miss Annie Danielson, Minneapolis; secretary, E. L. Newcomb, Minneapolis; treasurer, R. J. Messing, St. Paul; executive committee member, L. J. Aberwald, St. Paul.

St. Paul was selected as the place of next meeting, the date to be set by the executive committee.

N. A. D. C. PROPOSES NATIONAL CAMPAIGN

The Executive Board of the National Association of Drug Clerks met in Chicago on Jan. 22 and decided to begin at once an active national campaign to secure shorter hours and Sunday closing regulations as amendments to the various state pharmacy laws. To this end an appeal will be made for the co-operation of all church, civic, commercial and industrial bodies to secure such legislation, as also the enforcement of all regulations where such already exist. The board also fixed June 4 as the date for the 1918 annual convention of the association, which is to take the form of an open executive meeting with all social, entertainment and drug show features eliminated. Full dues paid members are invited to participate.

The board also adopted a resolution recommending that drug clerks do all in their power to encourage the sale of war savings stamps; approving the Edmonds bill for the creation of a Pharmaceutical Corps in the Army and instructing members to write to representatives in Congress to favor such legislation; appointing a committee of one to redraft the proposed National Pharmace[illegible] Commiss[illegible] which bill is to be submitted to the [illegible] the association, [illegible] various State pharmaceutical associations for consideration at the meetings of the several organizations to be held during 1918.

Amendments to the constitution of the association were also proposed changing the annual dues of members from $2 to $3 the same to become effective on Jan. 1, 1919. The amendment also eliminates the certificate of membership provision of the former article. The amending paragraphs also change the former provisions relating to the organization of subordinate affiliated organizations, and designate the names of subordinate "branches" as "councils" of the N. A. D. C.

KINGS COUNTY ASSOCIATION MEETS

Several matters of trade importance were brought up at the regular monthly meeting of the Kings County Pharmaceutical Society, held at Brooklyn, N. Y. Feb. 20. A very interesting report was submitted by Dr. W. C. Anderson, chairman of the Legislative committee, in which the proposed New York state legislation providing for the licensing of drug clerks immediately after graduation was the item of leading import. It was the sense of the meeting that such legislation would prove beneficial both to the clerks and to employing pharmacists.

The subject of early closing was given some consideration. A member of the local association at Jamaica, N. Y., was present and stated that the druggists of his town had shortened their hours with satisfactory results. It was the impression of a majority of those present that this was a question which must be settled by the druggists of each locality, and that no general ruling could be applied which would cover conditions everywhere.

A very interesting program will be arranged for the March meeting.

The Sacramento Retail Druggists' Association was recently organized in the California city, the following officers being elected: President, Marvin Sydenstricker; vice-president, R. F. Odell; secretary, Paul Fletcher; executive committee W. W. Brown, J. James, J. P. Lewis and Frank Grey. The association pledged its support to the local drug clerks association in the effort of the latter to make a success of the State convention of clerks to be held in Sacramento during the State Fair.

The New Drug Association whose object is to better local conditions and modernize the standards of the profession, was recently organized in Newark, N. J., fifty druggists taking part in the organization. Samuel Gardtenberg was elected president, Frank Hain, vice-president, A. Lubman, treasurer and I. H. Leventhal, secretary.

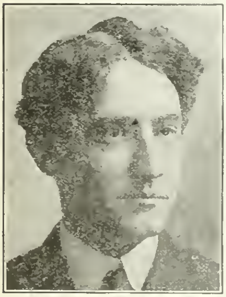
The Greater Johnstown Retail Druggists' Association, designed to co-operation in the regulation of the drug business in Johnstown, Pa., and vicinity, succeeds the old Cambria County association in that part of the State. The officers are: President, Mayor Louis Franke; vice-president, Harry Wertz; secretary, Ross Davis; treasurer, Vincent T. Reynolds. A board of directors is to be named by the president.

The Philadelphia Drug Exchange, at its recent annual meeting, elected the following officers: President, Harry B. French; vice-president, H. K. Mulford; secretary, Joseph W. England; board of directors, Blair Ferguson, Dr. A. W. Miller, Walter V. Smith, Adam Pfromm, Charles E. Hires, Richmond M. Shoemaker, Creighton F. Shoemaker and W. Robinson McIlvaine. The report of the board of directors reviewed the trade developments of the past year, stating that large investments had been made for the manufacture of chemicals, production in this direction being limited only by the difficulty in getting materials and not by any inability to sell the products, the average price for chemicals on the whole being probably less than a year ago.

Schools and Colleges

PROF. LaWALL NOW DEAN OF P. C. P.

Closely following the election of Prof. Charles H. LaWall as president of the American Pharmaceutical Association for 1917-1918, comes the announcement of his election by the Board of Trustees of Philadelphia College of Pharmacy to succeed the late Prof. Joseph P. Remington as dean of that institution. In the work of the association and the educational activities of the college, he has taken an important part, serving the former as vice-president in 1915, chairman and secretary of the section on education and legislation, secretary of the scientific section; and the college as instructor and associate professor since 1901.


Prof. Charles H. LaWall

Prof. LaWall was born in Allentown, Pa., 46 years ago, his father being a druggist of that city, who, in 1876, moved to Bloomsburg, Pa., where he had accepted a position with the drug firm of Moyer Bros., in whose establishment the junior LaWall received his early business training, after having been educated in the public schools and at the State Normal School at Bloomsburg. In 1901 he entered the Philadelphia College of Pharmacy, graduating therefrom in 1893, and receiving the degree of Master in Pharmacy in 1905. For thirteen years he was engaged in the laboratories of Smith, Kline and French Co. In 1901, he succeeded Frank G. Ryan as instructor in the theory and practice of pharmacy, becoming associate professor in the same department in 1905, a position he ably filled until his recent election as dean.

Prof. LaWall is also wellknown for his work as a chemist. In 1905 he became associated with Dr. Henry Leffman, whom he succeeded when the latter retired from business. In 1904 Prof. LaWall became chemist to the Pennsylvania State Dairy and Food Department, and has also served the Federal Government in a related capacity. In 1909 he succeeded Dr. Leffman as lecturer in the course of applied organic chemistry at the Wagner Free Institute of Science. He is the joint author with Dr. Leffman of a book on chemistry, and assisted in the last revision of the United States Dispensatory. Besides being a frequent contributor to pharmaceutical and chemical publications, he is a member of the U. S. P. Revision Committee of which he is secretary, and also chairman of the sub-committee on inorganic chemicals. His wife (née Miss Millicent Renshaw), is also a graduate of the Philadelphia College of Pharmacy and has rendered valuable assistance in the varied activities of her husband. She has been a member of the A. Ph. A. since 1905, and a regular attendant at the annual meetings of that organization.

Dean LaWall has also been nominated for the full professorship of the course in theory and practice of pharmacy, and Prof. E. Fullerton Cook for the full directorship of the pharmaceutical laboratories.

Prof. Julius W. Sturmer, at the same time, was elected dean of the post graduate and special courses, which include the bacteriologic and microscopic departments. Prof. Sturmer, until the recent amalgamation of the two colleges, was dean of the department of pharmacy of the Medico Chirurgical College.

Each month takes its toll of students from the Class roll. Since the Christmas holidays over twenty members of the pharmacy classes have been called to serve in the Nation's Armies.

At the last report the number of students and last year's graduates in Military and Naval Service has reached over the two hundred mark.

In line with the Nation's Food conservation program the customary annual banquets of the class organizations and fraternities have been temporarily postponed.

Hon. Howard B. French, president of the College, is serving in an official capacity as chairman of one of the committees dealing with the housing problems near the government's new shipbuilding plants in the League Island district.

WINS FIRST FAIRCHILD SCHOLARSHIP

The first award of the American Fairchild Scholarship has been made to Daniel Kollen of New York City. Mr. Kollen is of Russian birth, and a native of Kishinef, State of Bessarabia, where he was born in 1898. His father, who died when Daniel was about nine years of age, was a maker of wooden models for shoes. The young man attended a Russian grammar school for about three and a half years and until April 1, 1910, when the family emigrated to the United States. Two weeks after his arrival he entered Manhattan Public School No. 64, receiving a diploma therefrom on June 29, 1913. His spare hours and vacations were spent in the employ of his uncle at S. H. Ager's Pharmacy, 145 Ave. C., New York City, where also up to the present he has given his time between studies. In 1913 he entered the DeWitt Clinton High School, New York, graduating in June last year. He matriculated at the Brooklyn College of Pharmacy and is a member of the present junior class. Mr. Kollen's recommendations from teachers and preceptor are of an excellent character.

OKLAHOMA UNIVERSITY

The scarcity of pharmacists is becoming a serious problem to the druggists of the state. Several factors are responsible for this condition, among them being, the ready response of young pharmacists to the call to arms, the low wages paid in past years, and the increase in the number of stores in our rapidity growing state. The School of Pharmacy is in receipt of calls for both registered and unregistered men every week.

Four service flags, containing more than 550 blue stars, one for every University of Oklahoma man in military service, have been completed here. The names of the men are placed under the stars, giving also the year the man was graduated from the university, or, if not a graduate, the year he attended. If any Sooners are wounded, a small red star will be placed beside the blue one; if killed, a gold flag will be substituted for the blue star. More than 40 pharmacy alumni are now in the service.

Dr. H. S Browne, dean of the school of pharmacy, Walter R. Jarrett, secretary of the State Board of Pharmacy, and E. King, a pharmacist at Spiro, Oklahoma, have recently been appointed by the president of the Pharmaceutical Service Association, of Philadelphia, Penn., to work in behalf of the Edmonds Bill. This bill has been introduced into Congress and referred to the military committee. The Oklahoma Pharmaceutical Association has appointed a representative to go to Washington to work in behalf of the bill.

D. B. R. Johnson, Ph. G., A. B., Valparaiso, has been appointed instructor in pharmacy in the place of C. V. Nichols, who joined the army. Mr. Johnson is a registered pharmacist and has had several years experience in the drug business. He has also taught school a number of years and resigned a position as superintendent of public schools, in order to accept this position. In addition to pharmacy work, Mr. Johnson is also raising two hundred acres of wheat near Augusta, Okla.

S. Bruce Edwards, Ph. G. '20, who recently withdrew to join the army, is now at the hospital corps training school, Great Lakes, Illinois. He writes "Classes are different here from those at the university; we meet and listen to lectures, but are given no grades. At the end of the course we are given an examination, if we pass, we are all right, and if we don't we are obliged to take our course again, and in this manner we can flunk innumerable times."

C. V. Nichols, former instructor in the School of Pharmacy, who entered the service of the government as laboratory assistant in the base hospital at Camp Doniphan, Okla., writes that he likes camp life and is working hard.

The State Board of Pharmacy met in the pharmacy laboratory of the university, January 9, to give the practical examination for licenses. Twenty-eight men took this examination. The board meets regularly four times a year.

Elmer Ray, Ph. G. ex. '18, visited friends in Norman recently, while on his way home from Fort Clark, Texas. He was honorably discharged from Ambulance Co. 37, Fort Clark, on account of physical disability. He expects to re-enter the drug business in the near future.

BUFFALO

The Alumni Association of the Buffalo College of Pharmacy held its wid-winter dinner on Thursday evening, Jan. 31, at the Ellicott Club, and elected the following officers for the ensuing year: President, Henry A. Bell, '04; historian, Miss Hazel L. Robinson, '14; treasurer, Charles H. Gauger, '90; secretary, W. E. Lemon, '99; executive committee, Dr. A. B. Lemon, chairman; E. B. Blight, and Geo. Deitschler.

UNIVERSITY OF MICHIGAN

Dean A. B. Stevens, of the College of Pharmacy was recently called to Loma Lind, Cal., on account of the critical illness of his wife, whose death occurred on Feb. 6. Dean Stevens has the sympathy of all of his friends in his bereavement.

A con-joint meeting of the Detroit Branch of the A. Ph. A. and the Prescott Club of the College of Pharmacy was held at the Michigan Union, Ann Arbor, on Feb. 14.

The announcement has just been received here of the marriage of R. G. Brown, B. S., '14, who is now instructor in pharmacy in the University of Virginia.

Prof. Henry Kraemer has just returned from New York City, where he acted as a delegate from the American Conference of Faculties at the annual meeting of the American Drug Manufacturers' Association.

PROTECTING AMERICAN TRADEMARKS

Work of the Bureau of Foreign and Domestic Commerce—An International Trademark Registration Bureau Established at Havana, Cuba—Benefit to Manufacturers

The chief of the Bureau of Foreign and Domestic Commerce says in his annual report to the Secretary of Commerce:

"The Bureau's division of foreign tariffs put into successful operation during the year a plan to protect owners of American trademarks from loss and inconvenience in certain South American countries. In these countries the ownership of a trademark is based on priority of registration and not of use, as is the case in the United States, so that a person who registers the mark first has the right to keep the rightful owner from importing into the country goods bearing the registered trademark. In many cases American manufacturers have been compelled to buy back their own trademarks and in some cases have found it cheaper to use a new mark for certain countries. Instances have been found where the agents of American concerns have registered the marks of the firms they represent, so that the agencies can not well be taken away from them.

"To put an end to such abuses so far as possible, the division of foreign tariffs has adopted the plan of scrutinizing carefully all applications for trademark registration in certain Latin-American countries. When it finds an application for the registration of an American trademark or a close imitation it promptly notifies the American owner of the mark, explains to him the main features of the trademark laws in the country in question, and urges him to protest the registration of his mark by an unauthorized person. He is instructed in the procedure to be followed. The division has been successful in its determination to head off schemes of this kind, and a number of American firms have written to the Bureau expressing their appreciation of the service."

An International Trademark Registration Bureau has been established at Havana for the northern group of American republics as a result of the work of the International High Commission and in accordance with the plan of the International Convention of Trademarks signed in Buenos Aires in 1910. The Havana bureau will be supported on a pro rata basis by all the American republics of the northern group which have ratified the convention—the United States, Cuba, Dominican Republic, Guatemala, Honduras, Nicaragua, Panama and Costa Rica. Its operation will be under the direction of the Cuban Government. Efforts will now be centered on securing the early formation of the bureau at Rio de Janeiro.

Manufacturers of proprietary medicines and toilet articles are particularly anxious to have all of the countries of the Americas come in under the trademark agreement. With respect to the countries that are party to the agreement, the owner of a trademark, patent, or copyright, resident of the United States or any of the other countries concerned, will be required only to register the same in the Havana bureau to secure protection. The bureau will automatically take up registration with each of the countries named. This service will prove invaluable to American manufacturers and producers. Not only will it save them from the necessity of buying out the pirates, but will serve to protect their good names where pirates grasp the trademark and turn out an inferior type of goods.

Boards of Pharmacy

TEXAS

At the meeting of the Texas Board of Pharmacy held in Houston on Jan. 15, thirty-six applicants took the examination, the following being successful: Geo. L. Bader, Canadian; F. C. Billings, Galveston; F. C. Conwell, Galveston; Z. F. Dale, Dallas; J. C. Graham, Dallas; James Harris, Dallas; E. G. Jenkins, Galveston; E. P. LeBesu, McKinney; Sister M. L. McKeon, Galveston; G. R. Murchison, Galveston; F. H. Power, Coldthwaite; L. E. Robertson, Dallas; E. W. Schrimpf, Dallas; J. D. Stengel, Dallas; P. B. Turner, Dallas; M. T. Ward, Galveston; C. B. Bennett, Dallas; L. W. Condre, Jerrell; C. M. Curtsinger, Dallas; Sister M. A. Finley, Galveston; Dale Greenwood, Lipan; C. E. High, Dallas; H. M. Jones, Knox City; W. R. Martin, Galveston; F. H. Parker, Dallas; R. L. Patton, Dallas; W. H. Riedel, Yorktown; Ville Sanders, Galveston; D. L. Sprinkle, Terrell; Francisco Tomas, Galveston; H. N. Turney, Edna.

A petition from the senior class in pharmacy of the University of Texas was read, which urged the board to use its influence toward securing the passage of an amendment by the legislature to the pharmacy law providing college graduation as a pre-requisite to registration. The board promised to give the matter attention. The secretary read the report of the Investigating Committee appointed by the last legislature and its findings relative to the work of the board of pharmacy and the records of the secretary's office. After due consideration, the following resolution was adopted:

"Be it resolved, That the exhaustive report submitted by the secretary of the State Board of Pharmacy to the Investigating Committee, which covered a three years accounting in all details, entailing arduous labor and care in its preparation, be and is hereby approved and ordered spread on our minutes, and be it further resolved that the findings of the Investigating Committee be inscribed upon our records, in order to show in a clear and most explicit manner that our work has met with the hearty and earnest approval of this committee, who will in due course report their findings to the next session of the legislature."

A circular letter from the Council of Defense relating to the menace of venereal disease to the nation and soldier boys was read, the board deciding to give its collective and personal co-operation toward checking and eliminating this dread disease.

CALIFORNIA

Louis Zeh, secretary, announces under date of Feb. 6, the names of the following applicants who were granted degistration at the recent meeting of the California Board of Pharmacy:

Assistants—Lawrence F. Minor, William J. Connell, Howard G. Lawrence, Louie Mae Adams, Leonard Freedman, Peter N. Antonopoulos, Frank Bell, R. Hutchison, Lonnie W. Holland, Richard I. Merry, Jr., Charles A. Gibson, Otto W. Reynolds, Elmer F. Tostevin, Clarence S. Cain, Clair D. Spaulding, William E. Kuhfus, Arthur E. Mueller, Avis K. Smith, Roberto Salazar, Louis F. Garbarino, Clyde M. Phelps, Joseph Basch, Walter A. Ossenberg, Willey M. Moody, Oscar L. Gerlichs, John B. Stoleim, Joseph L. Melgar, John W. Gatewood, Arthur C. Scott, Sydney G. Pratt, Pauline S. Lucas, Oliver W. Delany, Helen Mooslin, William A. Gebhardt, John R. Burke, Harold T. Bush, Clifford F. Hawkins, Sister F. Conner, Irad V. Whitley, Justus E. Zimmerman, Andrew C. Kallstead, William G. Oldham, Hugh R. Selvy, James H. Lemmax.

Licentiates—Arthur A. Pittenger, Louis Lau, William Eidelson, John W. McCombs, Ira V. Scholfield, Harold J. Lincoln, Gorman R. Burtner, Irvin V. Kisseberth, Julian R. Hollingworth, Nicholas J. Volino, Joseph Francalanzo, Howard L. Carrell, James W. Maloney, John L. Ward, John V. Rossi, Ralph L. Cavanaugh, Frank W. Connolly, Robert D. Adler, Leo Fast, Arthur E. Jackson, Arthur V. Lagomarsino, Dwight R. Stoner, Grover C. Stadler, Louis Freedman, Raymond M. Walsh, Oliver R. Tuttle, Arthur C. Baisley, William D. Kelley, Arthur S. van der Stempel, LaMotte H. Stinson, Robert P. Sims, Sylvia M. Garoutte.

Credentials and twenty years' experience:

Joseph R. Cotterrel, Walter E. Bonfield, Cyrus R. Hamilton, Alick Robbie, Arthur M. Thomas, Herman F. Hintzon, Natasha N. Eidelson, Arthur Jackson, Charles D. Barnes, Jacob Brynilson, Willard M. Lewis, Charles W. Schroeder, Charles Grund.

A meeting of the board will be held in Los Angeles on April 8, the examinations, beginning on April 11, and in San Francisco on April 15, the examinations beginning on April 17.

SOUTH CAROLINA

The following applicants to practice pharmacy successfully passed the recent examination of the South Carolina Examining Board held at Sumter; R. W. Calhoun, Atlanta; J. R. Cantelyou, Jr., Edgefield; L. A. Coleman, Greenwood; W. H. King, and H. R. Page, Salemburg, N. C., and T. E. Rivers, Greenwood.

MINNESOTA

The Minnesota Board of Pharmacy announces the following list of applicants who successfully passed the examination held at Minneapolis in January:

Registered Pharmacists: George F. Stratton, George Houser, William Strimling and Ned Welch of Minneapolis; Arthur Lillienskiold and J. L. Stolkosky of St. Paul; L. H. Broeker, Selmer Haugen and Carl E. Willer of Fergus Falls; Birdie H. Adler, Rochester; C. E. Barnum, Glencoe; O. C. Christenson, Henning; J. E. Cycmanick, Wayzata; John F. Danger, Braham; F. A. DeWitz, Red Wing; W. M. Johnson, New Richland; F. J. Reichbert, Long Prairie; R. A. Schmucker, New Ulm; Paul H. Stuckey, Waseca.

Registered Assistants: Hallie Bruce, Theodore A. Kustermann, A. J. League and Valeria E. Malzahu of Minneapolis, C. O. D. Miller and Raymond Toonen of Duluth; C. M. Jones, Frazee; G. I. Kingman, East Grand Forks; Lewis B. Lacross, Detroit; Arthur J. Langer, St. Paul; William C. Muesing, New Ulm; W. M. Olson, Battle Lake; John W. Wallen, Alexandria, and George V. W. Sokolich, Butte, Mont.

OREGON

The Oregon Board of Pharmacy on Jan. 15 elected the following officers: President, J. Lee Brown, Marshfield; treasurer, Clyde G. Huntley, Oregon City; secretary, Ross M. Plummer, Portland. The board decided to hold three meetings during the year, the next meeting to be held at Portland on April 16 and 17. A meeting is also scheduled for Sept. 17 and 18. There is also a possibility that a special meeting will be held at Corvallis in May in response to an invitation made by the School of Pharmacy of the Oregon Agricultural College.

NORTH CAROLINA

The next meeting of the North Carolina Board of Pharmacy for the examination of candidates for license to practice pharmacy will be held at Raleigh on June 11. F. W. Hancock, secretary of the board, informs us that the requirements for taking the examination will be based upon the new law which went into effect in that state on January 1.

VIRGINIA

The Virginia Board of Pharmacy recently announced the following list of those who have successfully passed the board of pharmacy examination:

Registered pharmacists: E. E. Mayhew of Roanoke; R. L. Jarrett of Richmond; W. T. Manroe of Richmond; E. C. Wilson of Richmond; Guido Dorsogne of Passaic, N. J., R. J. Dowdy of Richmond; Jessie H. Fray of Madison; L. P. Argenbright of Richmond; E. B. Lauriault of Lynchburg; L. J. Henley of Tappahannock; W. W. Fountain of Norfolk; J. A. Vernon of Roanoke; A. R. Cross of Richmond.

Registered assistants: Thomas L. Preas of Bedford; R. T. Staton of Roanoke; J. T. Fuqua (colored) of Lynchburg.

KENTUCKY

At the meeting of the Kentucky Board of Pharmacy held in Covington in January, a class of thirteen thirteen applicants for registered pharmacists certificates and five for assistant's certificates were examined. Those passing were:

Registered pharmacists: Earl W. Clark, Covington; Charles Rive, Louisville; Eugene M. Sageser, Lexington; C. L. Vallandingham, Owenton; Maurice E. Wilson, Covington.

Assistants: Herbert C. Meyer, Cincinnati, O.; V. O. Shivel, Grayson; W. J. Habig, Cincinnati, O.; Samuel C. Reid, Richmond; Phillip H. Schilling, Covington.

The next meeting will be held in Louisville on April 9 and 10. Applications should be filed with the Secretary of the board, J. W. Gayle, Frankfort, Ky., at least ten days before that time.

OHIO

Of 41 applicants who took the examination of the Ohio Board of Pharmacy held at Columbus on Jan. 15-16, the following were granted certificates as registered pharmacists:

Nathaniel C. Benjamin, Louis Halberstadt, Cleveland; Henry Rudge, Youngstown; Nelson Wistner, Van Wert; H. Benton Hunter, Peebles; Carl D. Haugh, Wellsville; Floyd Clymens, Charles A. Higgins, Columbus; Samuel L. Moore, Ohio City; Ira E. Stabler, Payne. Dale Cunningham, Toledo, obtained a grade high enough to entitle him to an assistant certificate.

Of the nine applicants for the assistant examination the following were successful: Edmund F. Funk, Leonard S. Silverstein, Cleveland; Arthur J. Fratz, Cincinnati; Francis L. Mills, Columbus; Ruskin B. Lawyer, Cambridge.

Henry Rudge, of Youngstown, obtained the highest grade in the pharmacist's examination with a grade of 92.8. The highest grade in the assistant's examination was 89, reached by Edmund F. Funk, of Cleveland, and Arthur J. Fratz, of Cincinnati. The board recently joined the National Association of Boards of Pharmacy and now has reciprocity with the boards of most of the States. The next examination will be held in Columbus the first week in April, commencing on April 2.

The following resolution was adopted by the Ohio State Board of Pharmacy on January 30, 1918:

"Whereas, the Ohio State Fuel Commissioner has ordered the closing of Drug Stores throughout the state at 9 P. M. and,

"Whereas, this order is in harmony with the resolution adopted by the Ohio State Pharmaceutical Association as a patriotic war measure, and,

"Whereas, it meets with the approval of the majority of the profession of Pharmacy,

"Be it hereby resolved, that the Ohio Board of Pharmacy in session at Columbus this date endorses the action of the Ohio Fuel Commissioner in his order and tenders him their hearty support."

DRUGGISTS MUST HAVE LICENSES FOR EXPLOSIVES

Under the act of Congress of Oct. 6, 1917, all persons who purchase or have in their possession explosives or explosive ingredients to the amount of one ounce or more are required to take out a license, obtainable from the United States Bureau of Mines. In New York Federal licenses may be obtained from John R. Healy, Municipal Building, Manhattan, or John F. Dixon, No. 365 Jay St., Brooklyn. The fee for the license is twenty-five cents. If a naturalized citizen, the applicant must bring with him his naturalization papers. No licenses will be issued to alien enemies, and the authorities have the power to refuse to any person or firm whom they may have reason to believe is hostile to the United States. Application must be made in person. Duly authorized officers of corporations or companies must make application for the company or corporation.

The list of ingredients approved Jan. 5, the purchase, sale or use of which in amounts of one ounce or over requires a Federal Explosive License, is as follows:

Bichromates—Ammonium, potassium, sodium.

Chlorates—Barium, potassium, sodium, strontium.

Chromates—Ammonium, barium, calcium, chrome green, chrome yellow, lead, potassium, sodium.

Nitrates—Ammonium, barium, copper, ferric, lead, magnesium, nickel, potassium, silver, strontium.

Nitric acid—Aqua fortis, fuming, nitric various strengths, mixed acids.

Perchlorates—Perchloric acid, potassium.

Perborates—Magnesium, sodium, zinc.

Permanganates—Calcium, potassium, sodium.

Peroxides—Barium, calcium, magnesium, oxon (cubes and cartridges), sodium, strontium, zinc.

Phosphorus.

Under the law it is necessary for all druggists and pharmacists to make application for a license, as many of the substances named form part of every regular drug stock. Colleges and institutions of learning maintaining chemical laboratories are required to make similar application for license.

John Weyer, one of the early presidents of the Ohio State Pharmaceutical Association, and general manager of the Retail Druggists' Mutual Fire Insurance Co. of Ohio, died at his home in Norwood, a suburb of Cincinnati, on Jan. 31. He was a veteran of the Civil War, and prominent in the pharmaceutical activities of Ohio. He was 79 years of age.

War Time Conditions in Pharmacy

A. Ph. A. Branches Consider Emergency Measures, Pharmacists in the Army, and Sale of Alcohol

THE 93rd monthly meeting of the Chicago Branch of the American Pharmaceutical Association held recently was one of the most interesting in point of attendance and amount of business done of any that have been held this season. The dominant theme was that relating to the conservation of sugar and glycerin in pharmacy, in the discussion of which a number of well-known members took part. Secretary-Treasurer E. N. Gathercoal reported that of the members of the branch, 48 had been in attendance at meetings during the year, and that the membership now numbered 165. Two members, N. Gray Bartlett and J. F. Fischnar, died during the year. Mr. Gathercoal pointed out the need for an increased income for 1918, and recommended the appointment of a budget committee, a recommendation that was adopted, the executive committee being instructed to prepare a budget for the current year and to devise ways and means to finance it. C. C. Orr, chairman of the membership committee, reported 29 new members had been received in 1917 and 3 so far this year, viz., C. A. Seuring, Frank Ahlborn, and Geo. V. Haering.

Conserving Sugar and Glycerin

The Committee on Practice, I. A. Becker, chairman, presented an interesting report on the conservation of sugar and glycerin in pharmacy, from which the following points are taken:

"The scarcity of sugar and its importance as a food forced the pharmacists of Germany and its allies early in this war to conserve it to the utmost and to find substitutes wherever possible, for pharmaceutical purposes.

"The war demands for glycerin also soon caused a scarcity of the raw materials from which it is obtained, thus compelling, early, its limited use, and a search for substitutes. In England this need was reflected in the action of the General Council of Medical Education, in suspending the several formulas containing glycerin or sugar or both, from the British Pharmacopoeia, and publishing "War Emergency Formulas" to replace them.

"The position of the United States, a general supply depot to the other warring nations, during the greater part of the war, has made the situation serious for us rather early after our joining in the war. Therefore it behooves us carefully to consider ways and means for minimizing our consumption of these articles, and their elimination, whenever possible, in preparations they enter."

Mr. Becker then referred to the facts brought out in the recent paper read before the Northwestern Branch by F. A. Upsher Smith, who had recommended that a joint A. Ph. A. and N. A. R. D. committee be formed to devise substitute formulas to be put at the disposal of the U. S. P. Revision Committee, and their adoption urged. Mr. Becker also reviewed Prof. Wimmer's paper on the same subject, which was read before the New York Branch at the December meeting. Many samples of galenicals in which glycerin or sugar usually are found, but now made without the use of these substances, were shown, the exhibit including Basham's mixture, "syrupus factitius," B. P., "elixir simplex," etc.

British War Time Preparations

B. L. Eicher showed a group of preparations consisting of Syrupus Factitius, Elixir Simplex, Glycerinum Acidi Carbolici, Glycerinum Acidi Tannici, Glycerinum Amyli, Glycerinum Boracis, Syrupus Aurantii, Syrupus Limonis, and Syrupus Tolutanus, all of which had been accepted as official British sugar and glycerin substitute preparations. Of the whole group, the syrupus factitius and elixir simplex seemed the most desirable, many of the members expressing the belief that the latter was even a better preparation than our present official elixir with syrup and 25% alcohol. Syrupus tolutanus was also considered first class, the chloroform content undoubtedly adding to its therapeutic value. The sentiment was general that if the syrups of lemon and orange had been made from the fresh oils rather than from the tinctures, the products would have been better. Samples of syrup substitute using an Irish moss jelly proved commendable, especially as a vehicle for wild cherry cough preparations.

Object to Term "Substitute"

Wm. Gray showed samples of several elixirs and syrups made without sugar or glycerin; particularly an elixir of terpin hydrate in which the chemical was kept in solution with an equivalent quantity of glacial acetic acid, neither glycerin or alcohol being used.

R. A. Whidden stated that tragacanth gum was now very scarce and of poor quality, and its general use by druggists would soon consume the entire supply. Both he and Adolph Umenhofer strongly objected to the use of the term "substitute" in connection with pharmaceutical preparations. They held that substitution in connection with pharmacy was a term of reproach and ridicule in the public estimation, and that new and distinctive names should be adopted to designate preparations to be used in place of glycerin and syrup. I. M. Light advanced the argument that sugar and glycerin were not so scarce that their use in essential medicines should be discontinued, while they were being extensively used in the manufacture of candy and soda syrups, toilet articles, etc.

President Craig stated that there was a real shortage of both sugar and glycerin, which shortage would become more acutely felt as war continued, but agreed that the use of these articles in the non-essentials should be restricted before the restriction of their use in medicines. He urged the use of mucilages and a trace of alkali in toilet preparations in place of glycerin, and of corn syrup with saccharin, if necessary, in soda syrups. He said also that in France solutions of certain salts were used in place of glycerin.

Prof. W. B. Day, prefacing his remarks by stating that conditions to-day do not, perhaps, warrant the immediate introduction of sugar and glycerin substitutes for use in medicines, yet rapid changes might occur in which supplies of these materials might be suddenly shut off. We should be prepared to meet such conditions, and he therefore moved that "the U. S. P. and N. F. Revision committees be requested to consider the question of the conservation of sugar and glycerin in official preparations against the possibility of a government request that pharmacists curtail their use of these substances in medicine." Prof. Day's motion, when put to a vote, failed to carry, although the report of the committee was adopted.

The officers of the C. R. D. A. were given a rising vote of thanks for the service given by the **C. R. D. A. News** in announcing the meetings.

Officers Elected

The Nominating Committee submitted its report, which, with one change, was adopted, the secretary casting the ballot electing the following officers of the branch for the ensuing year:

President, Hugh Craig; 1st vice-president, A. H. Clark; 2nd vice-president, Mrs. A. S. Druehl; 3rd vice-president, E. Von Hermann; council member, Clyde M. Snow; secretary-treasurer, E. N. Gathercoal; committee chairman; Membership, W. B. Day; Legislation, Jas. H. Wells; Practice, I. A. Becker; Medical Relations, Dr. Bernard Fantus; Publicity, Thos. H. Potts.

Following an appreciative introduction by the president, Hon. Frank Freericks, of Cincinnati, made an address on the income and excess profits tax, using a number of charts to make his explanations plain. The address was warmly applauded, and at its conclusion Mr. Freericks answered many questions relating to income returns, etc.

BALTIMORE BRANCH

At the January meeting of the Baltimore Branch of the A. Ph. A. John C. Muth gave a most interesting talk on the subject of "The Laws Applying to the Sale of Alcohol," presenting the recent rulings of the Internal Revenue Department in a very clear and concise manner. In his talk Mr. Muth pointed out that alcohol produced prior to Sept. 9, 1917, is called "beverage alcohol" and can be sold without any restrictions other than those in force before the Food Control Act became operative; that alcohol produced since that date is called "non-beverage alcohol." That in making application to deal in "non-beverage alcohol" the applicant must file a bond covering three times the number of proof-gallons of alcohol he may have on hand at any one time, at the rate of one dollar a gallon. Liberty bonds covering the amount may be deposited with the Collecter of Internal Revenue. These bonds will be kept in Washington, the coupons being mailed the holder as the interest accrues.

A holder of a permit may not sell pure alcohol except to persons holding permits. To others he may only sell alcohol after it has been medicated according to one of the ten formulas suggested by the Department and in quantities of not exceeding one pint. The medication may not be done in advance but must be done at the time the order is received. Physicians prescriptions may be compounded with alcohol provided the alcohol is so medicated as to render it absolutely unfit for use as a beverage, and the druggist is held responsible as to the sufficiency of the medication. Non-beverage alcohol may be used without restriction in the manufacture of the U. S. P. or N. F. preparations. When alcohol is used in making other preparations, the manufacturer must file with the Collector certain data, giving the name of the preparation, the percentage of alcohol it contains and a sworn statement that this amount is no more than is necessary for the purposes of solution and preservation; that it is not a beverage or to be used as a beverage. Violations of these and other rulings found in Treasury Decisions No. 2576, are punishable by a fine of five thousand dollars or two years imprisonment, or both.

At the close of his address, Mr. Muth was given a rising vote of thanks and the Secretary was instructed to mail an abstract of the address to each member of the Branch.

A letter from the Washington Branch, A. Ph. A., suggesting that members of that Branch would like to attend the February meeting of this Branch was read and the Secretary was instructed to invite the Washington Branch to this meeting.

Tribute to Remington and Holzhauer

Dr. John F. Hancock paid tribute to the memory of the late Dr. Joseph P. Remington and Charles Holzhauer, and suggested that a committee be appointed to draft suitable resolutions on the death of these men. A committee consisting of Drs. J. F. Hancock, E. F. Kelly and H. P. Hynson was appointed and the following resolutions were presented and adopted:

Be it resolved, First, That we learned of the death of Professor Joseph Price Remington with deep regret.

Resolved, That we deeply sympathize with his bereaved family in their great loss.

Resolved, That the Branch do now suspend their business in order to pay appropriate respect to the memory of the lamented deceased.

Resolved, That the Secretary communicate these resolutions to the family of the deceased.

Be it resolved, First, That we learned with deep regret of the death of Mr. Charles Holzhauer, the beloved President of the American Pharmaceutical Association.

Resolved, That we deeply sympathize with his bereaved family in their great loss.

Resolved, That the Branch do now suspend other business in order to pay appropriate respect to the memory of the lamented deceased.

Resolved, That the Secretary communicate these resolutions to the family of the deceased.

The following officers were elected: President, C. C. Neal, 303 W. Pratt St,, Baltimore; vice-president and chairman of the executive committee, Miss E. Grace Lotz, 2135 Mt. Holly St., Baltimore; secretary-treasurer, Dr. Frontis Lentz; member of council, Dr. E. F. Kelly; chairman of committee on membership, Charles H. Ware; chairman of committee on professional relations, C. L. Meyer; chairman of committee on the science and practice of pharmacy, Dr. H. A. B. Dunning; chairman of committee on education and legislation, Charles Morgan.

NEW YORK BRANCH

Quite military in nature was the recent regular monthly meeting of the New York branch of the A. Ph. A., held at the New York College of Pharmacy. Robert P. Fischelis, secretary of the National Pharmaceutical Service Association, recently organized in Philadelphia, outlined and explained the Edmonds bill, "a measure to increase the efficiency of the medical department of the United States Army, to provide a pharmaceutical corps in that department, and to improve the status and efficiency of the pharmacists in the Army." Col. E. E. Pearsons, of the Army Ambulance Service, and Major H. Sheridan Baketel, in charge of the Army supply depot in New York City, were other speakers, who not only shed an interesting light upon their official work, but also criticized the Edmonds bill in a very fair and constructive manner.

Dispensing in the Army

Mr. Fischelis pointed out that the path to a commission as a pharmacist was practically blocked. The reply to all interrogations as to the cause of this condition was to the effect that pharmacists are not needed in the army, that most army medication was in tabloid form, and that the only need of pharmacists was in the hospital corps as enlisted men. Pharmacists who had specialized in bacteriology, food and drug work and other special lines, felt that something better than an enlistment should be open to them in the army. Philadelphia druggists first met to take the matter up, but many members had come from outside to the organization subsequently formed. Having learned that the United States Army was to be reorganized upon the French plan, three representatives of druggists' associations obtained a hearing with the Surgeon-General, but it was evident that the latter would not recommend the establishment of a pharmaceutical corps. Having arrived at this conclusion, the Edmonds bill was drawn up, introduced in the House of Representatives, and has been referred to the committee on military affairs.

The Edmonds Bill, H. R. 5531, is too long to enlarge upon in detail in this report, but its pertinent features may be grasped by a perusal of the arguments pro and con which followed Mr. Fischelis' outline. He declared that nothing in the bill covered army activities which were strictly medical, and none of its provisions related to work not strictly pharmaceutical. "Every pharmacist put at the work as intended under this bill liberates a medical man for the work at which he belongs."

Failings of Army Pharmacy

Mr. Fischelis read a number of letter from army men doing pharmaceutical work, none of which showed pharmacy in the army in a very alluring light. One writer outlined what he considered the failings of army pharmacy as follows: 1, poor drugs; 2, inadequate supply of drugs; 3, the dispenser has no voice over his work (he might be court-martialed for not compounding an incompatible prescription); 4, medical practitioners all want good dispensers, but the latter must face the antagonism of men in the service, who know little of real pharmacy; 5, that although the medical department is changing in that it is making great strides in the direction of preventive medicines, surgery, etc., it has not been particularly interested in securing good drugs; 6, as to equipment, anything will do, no measures or balances, old fruit jars for glassware, etc.

Training the Ambulance Corps

Col. E. E. Pearsons, of the Army Ambulance Corps, encamped at Allentown, Pa., spoke informally of the work of his service. He told how 4,000 college boys from all over the United States had swooped down upon him and one other Army medical officer at Allentown, how an old fair grounds had been secured for their quarters, how the boys had been divided into units of about 45 men each, promising men from each unit picked out as temporary leaders, and how after intensive training 82 units had already been sent "over there," and others were getting ready to go, the full work of the Corps being the sending to France of 160 units. These units were each equipped with 20 Ford ambulances which go right up to the dug-outs immediately behind the trenches. Heavy ambulances used to do this, but shell-holes or other obstacles in the road would detain them till day-break when they would attract the enemy's shell fire. Twelve men can lift the "flivver" ambulances across a shell hole, and permit it to proceed.

The Ambulance Corps was organized through 43 sections established in colleges and universities throughout the country. The ambulance operates with only one officer, a lieutenant who reports directly to the French general in charge of the division with which he is stationed.

Speaking upon the two bills discussed at the meeting, Col. Pearsons said that in his experience, he had never found any opposition to commissioned pharmacists in the Army in places where pharmaceutical work is done. "All Army medical officers desire to see Army pharmacy on a better basis. I am thoroughly in sympathy with the desire of pharmacists to divorce themselves from the commercial side of their work. It is a highly laudable ambition to want to benefit by having commissioned pharmacists in the Army. As for making a lot of places for pharmacists in the Army, there is nothing to it."

Col. Pearsons thought that the Edmonds bill tended to detract from more than to magnify the dignity of pharmacy by bringing in the purchasing end—which is not a job for a doctor or a pharmacist. "For efficiency's sake, the Army should be operated as one great business. There should be a general purchasing bureau with necessary sub-bureaus, and the medical bureau should be conducted as such." Col. Pearsons would like to see a few high grade pharmacists as commissioned officers in the larger hospitals—a colonel, a major, a few captains, all positions of dignity, but he would not want to see commissioned officers doing a drug clerk's work. The Hicks bill, he asserted, had the advantage of being elastic.

Purchasing Medical Supplies

Major Baketel declared that purchasing of supplies was "vital if not romantic." He agreed that the pharmacist should be advanced to his proper rank in the Army, that of a commissioned officer. He could not, however, see why a pharmacist should want to buy the thousands of things, everything from a broom to a bed, which had to be purchased, any more than the physician should buy them. Army buying, he said, was done by specialists in their own line. For instance, at his direction, 673 analyses of drugs, chemicals, textiles, cotton, gauzes, etc., were made upon samples of prospective purchases last year. The Army buys according to strict specifications, which are lived up to. His department had gotten together the greatest accumulation of medical supplies the country had ever known, and very sizable requisitions for medical supplies are filled and shipped the same day as received.

DETROIT BRANCH

A joint meeting of the Detroit Branch of the American Pharmaceutical Association and the Prescott Club of the University of Michigan, held at Ann Arbor, Feb. 14th, proved to be one of the most interesting of the year.

The delegation was honored by the presence of Dr. H. B. Hutchins, president of the University, who, after a short address of welcome to the visitors by Dr. Kraemer, spoke of his appreciation of the efforts of the American Pharmaceutical Association to obtain proper recognition for the profession. Both speakers paid high tribute to the memory of Dr. Prescott, in whose honor the Prescott Club was organized. C. F. Mann, treasurer of the Detroit branch expressed the gratification felt by the Detroit representatives for the hearty welcome received, and having known Dr. Prescott personally, spoke of the wonderful character of the latter. He also voiced the sorrow of the Branch on account of the absence of Dean Dr. A. B. Stevens and the sympathy of the organization for him in his recent bereavement.

The joint meeting of the two organizations was called to order by the president of the Prescott Club. "Paraffin Films and Oil Dressings for Treatment of Wounds and Burns," being a topic of keen interest at the present time, the talk and demonstrations given by Wm. Bonisteel were followed very closely. The Carrel-Dakin Solution is also attracting quite a lot of attention and Mr. Wagener, in presenting "Technic Employed in Making Carrel-Dakin Solution," aroused considerable discussion.

H. B. McWilliams showed very clearly the two sides of present pharmacy, the ethical and the commercial views, pointing out that as a profession, the ethical side must predominate. As defenders of each side were present, heated discussion followed. The speakers were members of the Prescott Club, but the Detroit representatives were very active in the discussions.

The March meeting also promises to be very interesting, Mr. Wendell, display manager of the J. L. Hudson Co., will discuss window displays and the methods of obtaining the best results.

Women in Pharmacy

CONDUCTED BY EMMA GARY WALLACE

The greatest of sympathy is felt and expressed on every hand for both Miss Emma Frick, president of the Louisville Chapter W. O. N. A. R. D., and Robert Frick, ex-president of the N. A. R. D., in the recent sudden and distressing death of their brother Charles P. Frick.

Mrs. Nellie Florence Lee, financial secretary of the W. O. N. A. R. D. and President of Philadelphia Chapter No. 6, had issued cards at the time of going to press for her Annual Reception to be held at her home Feb 14th. Mrs. Leslie O. Wallace of Auburn, N. Y., and Mrs. John C. Otis of Cincinnati were the guests of honor, Mrs. Wallace being the corresponding-recording secretary of the organization, and Mrs. Otis the treasurer. It has been the custom of the Philadelphia Chapter to give an Anniversary Entertainment and Dance every year, but this season these social affairs are being omitted as a war measure, and especially as Philadelphia Chapter is active in Red Cross work.

The Entertainment Committee of Milwaukee Chapter No. 19, held a Christmas Party on Dec. 27th for the children of the members, the idea being to establish an acquaintance and friendship between the little people. The afternoon was spent in playing games and singing patriotic songs, the children contributing with recitations of their own.

On account of war conditions, the Annual Banquet of the Anniversary of the Milwaukee organization, was called off. Upon invitation of Chicago Chapter, eleven of the Milwaukee ladies went to that city on Jan. 8th to attend a social affair given in their honor. A severe snow storm was raging and less courageous people would have been kept at home, but the Milwaukee members went nevertheless. They were met by officers of the Chicago Chapter who conducted them on a sightseeing tour and thence to the Hotel LaSalle where a dainty lunch was served. Following the luncheon the visitors and the chapter members assembled in the Red Room of the hotel, Mrs. Forbrich, president of the Chapter, extending a cordial welcome to the Milwaukee guests. Both Mrs. Lambeck, president of the Milwaukee Chapter, and Mrs. Eckstein, one of the vice-presidents of the National, responded. All enjoyed the program arranged. A pleasant feature was the address of Thomas Potts, who said he came to shake hands with the Milwaukee ladies. Mrs. Riemenschneider, president of the W. O. N. A. R. D., was present and busy making every one feel at home.

Later in the afternoon refreshments were served by twelve hostesses representing the twelve months of the year. These were: January, Mrs. J. A. Mahaffy, February, Mrs. F. Mares; March, Mrs. C. Bernard; April, Mrs. E. Zoller; May, Mrs. A. Kennedy; June, Mrs. L. Schmid; July, Mrs. A. Berger; August, Mrs. B. Nedder; September, Mrs. A. Joph; October, Mrs. G. Merz; November, Mrs. M. Battles; December, Mrs. C. H. Hirsch.

Ladies' Day was celebrated on Friday, Jan. 18th at Bensinger Alleys by the C. R. D. A. and their friends. The affair was in charge of Joseph F. Forbrich. About fifty of the ladies enjoyed the bowling and won prizes to the number of fifteen. A luncheon was served consisting of ginger ale, ice cream, candy and sandwiches, and every one had a royal good time.

Cleveland Chapter No. 21, has formally adopted a constitution and by-laws, which will enable it to go forward in a solid and constructive way to the accomplishment of large tasks. The Chapter now has a membership of eighty-five and is planning many social affairs with the idea of bringing the drug folk of the city into a closer social union. On Feb. 6th they gave a Grand Ball at Anderson's Academy. This was largely attended, about 150 couples being present.

The Executive Board meeting of Louisville Chapter called for Feb 4th, at the Young Women's Christian Association by Mrs. S. E. May, first vice-president, was immediately adjourned out of respect to the president, Miss Emma Frick, whose brother had just been killed.

The roster of February meetings for the Chapter was: Feb. 12th, Board of Managers' Entertainment and Card Party at Tyler Hotel; Feb. 21st, a social meeting and Minstrel Show with Mrs. William Taffel as hostess; Feb. 25th, Executive Board meeting at Y. W. C. A. rooms. In spite of zero weather the Chapter has been busy with committee meetings, patriotic and benevolent work.

The Seventh Annual Ball was held at Hotel Tyler, Thursday, Jan. 24th. The attendance was large and the decorations very beautiful, being yellow chrysanthemums, ferns and palms.

Mrs. Alice W. Farris of Cincinnati, has inherited the entire interest of the late Harry G. Foulds in the Cincinnati Perfumery Company. Mr. Foulds was the president of this concern. Mrs. Farris is authorized to continue the business or dispose of it as may seem wise.

The Women's Club of the Allied Drug Trade, Chicago, held its semi-annual meeting at the Hotel LaSalle, Jan. 24th. This is a separate organization from the W. O., although many of the members belong to both associations.

Queen City Chapter No. 5, held its January meeting at Bethesda Hospital. Miss Bertha Ott, the hospital pharmacist, acted as hostess. Mrs. Katz was out for the first time after her long illness. The February meeting was held at the home of Mrs. Katz, at which time the Eleventh Anniversary of the Chapter was celebrated. Luncheon was served by the following ladies: Mrs. Lutterman, Waldvogel, Murphy, Linesch, Blesi, Werner, Strauss, Gansz and Katz. Each person present paid 35c for her hot luncheon, the proceeds being donated to local charity. The Cincinnati women are active in Red Cross work, especially in the department of surgical dressings.

St. Louis Chapter No. 8 is in receipt of letters of thanks from the Y. M. C. A., the Tuberculosis Society, and the Provident Association, all of which received donations and gifts from the Chapter at Christmas time.

THE HUGE TASK OF SUPPLYING DRUGS AND CHEMICALS FOR ARMY AND NAVY

More Quinine Called for Than was Available in the Whole World—Containers Needed Were Beyond Capacity of Manufacturers to Supply—Proposals Cut to 25 Per Cent of Estimate.

The report of the Committee on Industrial Preparedness which was read at the meeting of the American Drug Manufacturers in New York gave some interesting facts about the Government requirements in chemicals, drugs, etc., for the army and navy. The pharmaceutical and chemical manufacturers were organized in one group, Class 1. The report says:

The organization meeting of Class 1 Manufacturers was attended by the executives of about 150 Pharmaceutical and Medicinal Chemical manufacturing houses summoned from all parts of this country and was probably the largest meeting of such manufacturers, large and small, ever held.

Organization of the class being perfected, a general committee was appointed from which a smaller Executive Committee of five to better carry on the work, was appointed, of which Mr. Ohlinger was made Chairman. This Executive Committee was given full power to act. It was given temporary offices in the Munsey Building, Washington, where it spent a week working day and night, preparing and grouping the lists, making suggestions as to standards, equivalents for drugs no longer obtainable, conforming to trade customs as to size and style of containers, packing, shipping, formulas, etc. After consulting with the members of the General Committee by wire, the action of the Executive Committee was unanimously approved.

The Executive Committee went over the lists of drugs and chemicals supplied by the Army, (including the Veterinary list), and Navy. The requirements for the Navy were small and the lists readily arranged. In the case of the Army the lists called for enough materials for 1,000,000 men for one year and necessarily called for tremendous amounts of some commodities. For instance, there was something like 100,000 pounds of quinine. It was a serious question if there was that amount available in all the world. The list called for 20,000 pounds of phenacetin. This chemical was very high in price at the time and practically out of the market. The Committee suggested acetanilid in its place. On compound cathartics, the list called for 138-000,000 pills. Some of the ingredients entering into the formula were costly and scarce and it seemed unwise to offer such a quantity for manufacture at one time.

It was feared by the Executive Committee that calling for such large amounts of goods at once would be unwise since it would surely greatly affect or even upset the market to such an extent that necessary items could not be promptly supplied. For example, the number of containers needed passed all expectations, the lists of the two supply stations of the Army including the veterinary list required about 40,000 gross, or over 6,000,000 containers, allowance being made for a very moderate breakage. The Committee considered it almost hopeless to get bids on the quantities indicated, particularly because of the large number of containers required. The decision finally was to cut down the amounts to 25%, equivalent to supplies for 250,000 men for 1 year, or for 1,000,000 men for 3 months, and to call for bids for these amounts every three or four months, or at shorter intervals as the army was increased. It recommended that prevailing trade customs, sizes and styles of containers, quantities and doses of the wine and avoirdupois systems be employed along with the metric without prejudice to either. This was a very important point in producing large amounts of materials in a short period of time.

There was a disposition on the part of the authorities to have the Executive Committee allot orders and award contracts to manufacturers best in position to produce. The Committee of this Class I, however, decided against such a plan as inadvisable as can readily be seen and as unfair to the trade at large, since it was felt that anyone desiring to do so should have an equal opportunity to bid on this business, and could obtain lists as they were issued by registering his name with the various supply depots of the army and navy.

The authorities also discussed the proposition of manufacturers supplying Army and Navy needs on the basis of cost plus a percentage. Again the Committee differed with those in authority since the matter of cost, particularly in reference to pharmaceutical supplies, would entail a great amount of detail and would be cumbersome and expensive for the Government to send experts to check up the cost of the hundreds of items required. The belief prevailed that the Government would obtain better prices on the basis of competitive bidding since some houses held stocks purchased at low prices and which we believed they were willing from patriotic motives to turn over to the army and navy, on the basis of the prices paid for the raw materials, rather than on prevailing market prices.

Results actually obtained in a practical way now show conclusively that the judgment of the Committee as to the desirability of the system of competitive bidding in this class was correct and wise, since the figures show that the Government actually paid less on the second award of contracts than on the first and while a record of the complete bids to date is not in the hands of the Committee, the tendency has quite uniformly been toward a shading of prices on successive bids.

Obituaries

DAVID WATSON

David Watson, for many years a member of the wholesale drug firm of Kerry, Watson & Co., and also of D. Watson & Co., manufacturers of drug specialties, Montreal, Canada, died on Jan. 15. He was born in Arbroath, Scotland, and emigrated to Montreal sixty-two years ago, immediately entering the business and some years later organizing Kerry, Watson & Co., one of the best known wholesale drug concerns in the Dominion. He was honorary president of the Montreal College of Pharmacy, president of the Proprietary Articles Trade Association of Canada, a member of the Montreal Board of Trade and numerous other organizations of Canada.

CHARLES P. FRICK

Charles P. Frick, secretary of the Robinson-Pettit Co., wholesale druggists, Louisville, Ky., was killed recently when returning to his home after spending the evening with friends at his club. The walk being very icy, he stepped into the street where he was struck by a passing automobile, throwing him against the ground and causing an internal hemorrhage from which death resulted. He was born in Louisville 62 years ago, graduating from the Louisville College of Pharmacy in 1873. He was widely known in the drug trade, and was a brother of Robert J. Frick, an ex-president of the N. A. R. D., and a wellknown druggist of Louisville.

Patents and Trade Marks

PATENTS

Granted Jan. 15, 1918

1,253,261—James P. A. McCoy, Wilkinsburg, Pa., assignor to Westinghouse Electric and Mfg. Co. Condensation product and method of producing same.

1,253,262—James P. A. McCoy, Wilkinsburg, Pa., assignor to Westinghouse Electric and Mfg. Co. Phenolic condensation product.

1,253,334—Albert D. Barr, McHue, Ark. Ferments and process of making same.

1,253,404—James P. A. McCoy, Wilkinsburg, Pa., assignor to Westinghouse Electric and Mfg. Co. Process of preparing phenolic condensation products.

1,253,534—Martin Rohmer, Gersthofen, assignor to Farbwerke Vorm. Meister Lucius & Bruning, Hochst-on-the-Main, Germany. Process of producing nitrogen simultaneously with oxids of nitrogen.

1,253,560—Edward L. Anderson, Pittsburg, Pa. Potash extraction.

1,253,571—Louis C. Bonneau, St. Denis, and Victor E. Hasenfratz, Levallois-Perret, France. Treatment of the residue from gas purification known as crude ammoniac.

1,253,579—Sid A Deanes, West Point, Miss. Dispensing device.

1,253,615—Karl P. McElroy, assignor to Chemical Development Co., Washington, D. C. Manufacture of chlorhydrins.

1,253,616—Karl P. McElroy, assignor to Chemical Development Co., Washington, D. C. Process of making chlorhydrins.

1,253,622—Edward B. Maxted, Walsall, England. Manufacture of pure hydrogen.

1,253,793—Herman Dedichen, and Ole Halse, assignors to Union Co., Christiana, Norway. Process of refining and deodorizing raw turpentine oils.

1,253,830—Jens H. H. Jacobson, Herloev, Denmark. Method of manufacturing radio-active mineral-water salts.

1,253,857—Leon Martocci-Pisculli, New York, N. Y. Formaldehyde thermometer-holder.

Granted Jan. 22, 1918

1,254,033—Gustav Eberle, deceased, by Elsa Eberle, born Mutschler, executrix, Stuttgart, Germany. Preparation of amino compounds by fermentation.

1,254,048—Karl P. McElroy, Washington, D. C. Laboratory apparatus.

1,254,132—Adrian St. Clair Garman, Philadelphia, Pa. Medicine cabinet.

1,254,217—Ulysses G. Drummond, Kersey, Colo. Bottle brush.

1,254,276—James D. Reifsynder, assignor to Stokes & Smith Co., Summerdale, Philadelphia, Pa. Label applying machine.

1,254,450—1,254,451—Frederick Tschirner, Newark, N. J. Process for extracting potassium salts.

1,254,521—John R. MacMillan, Niagara Falls, N. Y., assignor to Niagara Alkali Co. Process of recovering high grade potash products.

1,254,616—Wallace A. Martindale, Charleston, S. C. Poison-container.

Granted Jan. 29, 1918

1,254,655—Paul Carpenter, Chicago, Ill. Ampul.

1,254,896—Jose V. Fernandez, assignor to Maria Rogrignez y Sol, Santa Clara, Cuba. Non-refillable bottle.

1,254,915—Louis Landolfi, New York, N. Y., assignor of one-half to Michael Pascocello and one-half to John D. Caruso. Non-refillable bottle.

1,255,020—Herman B. Kipper, New York, N. Y. Process of producing chlorin and sulfate of sodium by catalysis.

1,255,079—Clarence E. Cedarvall, Rockford, Ill. Non-refillable bottle.

Granted Feb. 5, 1918

1,255,335—George B. Pegram, New York, N. Y. Method and means for applying iodin compounds.

1,255,390—Arnold Corti, Dubendorf, near Zurich, Switzerland. Process to separate glutaminic acid from other amino acids.

1,255,423—Paul Hussy and Willy Fohrenbach, assignors to Society of Chemical Industry in Basle, Basel, Switzerland. Compounds derived from diallylbarbituric acid and alkaloids of the morphin series and a process of making same.

1,255,719—Pierre Dutoit, assignor to Society of Chemical Industry in Basle, Basel, Switzerland. Process for the manufacture of betaaminoanthraquinone.

TRADE MARKS

Published Jan. 22, 1918

106,171—Jennie Agan, Los Angeles, Cal. Face creams, face-powders, etc.

106,569—Amovine Laboratories, New York, N. Y. Shampoo, face-lotions.

106,576—Hall & Ruckel, New York, N. Y. Face powder.

106,645—John A. Wheelis, Havre, Mont. Preparation for rheumatism.

106,920—New York Kaolin Mfg. Co., Inc., New York, N. Y. Preparation used in the treatment of pneumonia, rheumatism, etc.

107,444—The Solvay Process Co., Solvay, N. Y. Soda-ash and caustic soda.

107,495—Frank L. Rousseau, Pittsburg, Pa. Corn plaster.

107,530—The Holland-India Oil Co., New York, N. Y. An oil for effecting the cure of rheumatism.

107,538—Max Wohlgemuth, New York, N. Y. Iodin in a jelly form.

107,571—The Removo Co., Syracuse, N. Y. A depilatory powder.

107,578—The Sentanel Remedies Co., Inc., Cincinnati, Ohio. Nerve-tonic in tablet form.

107,633—Modern Drug and Chemical Co., Inc., New York, N. Y. An artificially-prepared medicinal water.

107,690—Frederick Stearns & Co., Detroit, Mich. Perfumes, face powder and toilet waters.

107,691—Frederick Stearns & Co., Detroit, Mich. Disinfectant, deodorant and germicide.

107,798—Wilson Chemical Co., Council Bluffs, Iowa. Deodorizing and disinfecting perfume.

A NEW PARRESINE ATOMIZER

The successful treatment of burns in the war hospitals of France by the hot-wax method has resulted in the adoption of similar methods in this country. The first product presented to the medical profession, over here, was Parresine (Abbott), a non-secret combination of wax, resin and Eucalyptol which is very similar in its physical character to the famous French product, so successfully used by Dr. D. E. Sandfort, particularly as regards plasticity, ductibility, pliability and adhesiveness.

Parresine was presented to the Council on Pharmacy and Chemistry of the American Medical Association and approved by that body for inclusion in the list of New and Non-Official Remedies. Clinical data and reports from industrial physicians, hospitals and surgeons seem to justify the claims made for Parresine as regards relief from pain, prompt healing, convenience in redressing, and fewer scars and contractions.

While Parresine in its liquid state may be applied to burns with a camel's hair brush the most satisfactory method has been found to be means of a spray or atomizer. The first apparatus brought out for this purpose was expensive and not entirely satisfactory. A new atomizer has now been developed which is not only economical but constructed along scientific principles and very satisfactory. The price of this new Parresine atomizer made by the Abbott Laboratories, Chicago, and illustrated on another page, is only $4.00. It will hold enough melted Parresine to cover any ordinary burn without refilling.

DENTINOL & PYORRHOCIDE CO'S NEW HOME

The Dentinol & Pyorrhocide Company recently removed its executive offices from 110 West 40th street, New York, to 1480 Broadway, corner of 42nd street, same city, the change in location being necessary to facilitate the company's rapidly increasing business. The company is now conducting a national advertising campaign in many of the leading newspapers and magazines of the country having an extensive circulation for its wellknown home treatment for pyorrhea, Pyorrhocide Powder, and druggists should arrange their stocks to meet the increased demand that is sure to come from this publicity.

UNGUENTINE CONES FOR HEMORRHOIDS

It is probable that no one condition met with in the daily routine of the drug business causes more unpleasantness to the patient than that of hemorrhoids. It is equally true that physicians the country over prescribe one treatment more generally than any other and that treatment is Unguentine Cones. Hence the druggist who fails to carry them is overlooking an opportunity that means money to him. They are not merely palliative but curative in a surprisingly large number of cases. Any jobber can supply you or they can be obtained direct from the nearest branch of The Norwich Pharmacal Company.

ESTABLISHED 1887

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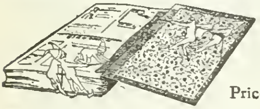

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WHERE DO YOU STAND?

We appreciate the patriotic co-operation of the firms who have acted with us on the suggestion of the Liberty Loan Committee in publishing a special series of arguments why every American druggist should buy these Government bonds. In such times as these it is necessary for us to come out squarely and show by deeds, not words, that we are real fighters in the war against autocracy. And if there is still any druggist who doubts the real meaning of this war that we are waging, let him read the arraignment of *kultur* and all its sinister meanings by one of the most distinguished members of our profession which is printed in this issue. Professor Kraemer is one of our best known and most respected pharmaceutical educators, a man educated in Germany, a teacher of well-known conservatism and soundness of judgment. His deliberate, merciless exposure of the whole German system of education is only one argument for the destruction of Prussianism, the cause for which we fight. It is, however, an argument that appeals strongly to pharmacists, a telling reason why all of us must help the cause of Democracy by buying Liberty Bonds.

AMERICAN NAMES OF SYNTHETICS

As stated elsewhere in this issue of the ERA, the Federal Trade Commission, acting under the provisions of the Trading with the Enemy Act, has licensed a number of American firms to manufacture certain drugs and chemicals by using enemy controlled patents. So far as pharmacists and physicians are concerned, these are the patents relating to veronal, novocain and salvarsan, all of which have been more or less extensively employed in this country for a number of years and have come to be looked upon as most valuable additions to modern materia medica. Perhaps the most significant feature of the license to permit the manufacture of these products under American auspices is the Government regulation forbidding exorbitant prices at which the synthetics shall be sold to the consumer, and also, the determination of the authorities to permit the exploitation of these remedies only under American trade names. Thus we have "barbital" for the German name "veronal," "procaine" for "novocaine," and "arsphenamine" for "salvarsan," names which deserve to be popularized and used by physicians and pharmacists if for no other reason than that of patriotism and of contributing moral and financial support to the measures our Government has adopted to relieve suffering humanity without giving aid to the enemy.

One of the most impressive lessons taught by the stoppage of importations of synthetic drugs as a result of the war, as Prof. Julius Stieglitz of Chicago sees it, is the fact that only a comparatively small proportion of the synthetics still protected by patents and introduced into this country before the war has been found essential for the proper medical care of the people. Of this small proportion, only a very few have been in such urgent and widespread demand that manufacturers have been glad to undertake their preparation without feeling that they were entering on the enterprise simply as an act of patriotic service. The three synthetics mentioned are among those which have been in demand, and we believe every effort should be made to secure their general use under the new official names which have been adopted by the Federal Trade Commission. So far as any of the new names are concerned, it will take no greater mental effort to familiarize oneself with these than it will to learn the use of any of the dozens of names of German parentage in use before the war. While any manufacturer licensed to make any of these German synthetics may have his own trade name on the label of the product he so makes and sells, the regulations require that the official name must be the prominent one on his labels. There is every reason why the official names should be popularized and pharmacists can aid materially in this work by using them to the exclusion of every other designation.

ALL ARE REGISTERED PHARMACISTS

There have come to hand within the past few months, both in this country and England, criticisms of the use some druggists make of the term "chemist" in connection with the phrase "chemist and druggist," as used to designate their calling as compounders and purveyors of medicines. It is probable that this custom has obtained a much wider usage in Great Britain than in this country, but why any druggist on this side should try to make the world of trade believe that he is a chemist, we cannot understand. It is true that quite a number of druggists hold the degree of "pharmaceutical chemist," and when this term is used in full form it is not misleading nor its employment objectionable. There are but few pharmacists in the country, however, who make a practice of doing chemical analysis, and as the professional chemist sees it, the druggist who makes use of the term "chemist" on his sign and whose business is most largely made up of selling side lines of the widely divergent character that may be kept within the elastic boundaries of a modern drug stock, is sailing somewhat under false colors as to the nature of his real business.

There is one term, however, to which the druggist can lay claim and to which no objection can be made. We refer to the term "pharmacist," which appears to the exclusion of every other term in the laws of the various states regulating the practice of pharmacy. The term "registered pharmacist" can be assumed by no one who has not the license granting him such right, and while these laws frequently use as synonymous terms "druggist" and "apothecary," precedence is always given to the pharmacist.

Some of our leading dictionary makers apparently are oblivious to this fact, as they refer to the pharmacist as a druggist, rather than to the druggist as a pharmacist. The term apothecary has become largely obsolete so far as its usage in this country is concerned, notwithstanding the fact that it was early introduced into the language as meaning, literally, a storekeeper, and later was shunted off to stand for one who dealt in drugs. Pharmacy, the lexicographers tell us, comes from the Greek word indicating a knowledge of drugs, and here we have ancient authority for the dignity of the name. The student of Cicero may recall that worthy's use of the phrase "pharmacopola circumforaneus" to designate one who sells ointment about the streets, and that sometimes "pharmacopola" was used interchangeably to indicate either an "apothecary" or a "mountebank doctor," but such usage in no way detracts from the term pharmacist as now employed. The tendency of modern language is toward exactness in the use of terms, and there is every reason why the pharmacist should use the designation given to him by the laws of every State in the Union.

BOARD OF PHARMACY EXAMINATIONS

Taken in their entirety, the average board of pharmacy examinations are a somewhat different proposition from that which obtained fifteen or twenty years ago. Then, many of the questions submitted to applicants for registration were couched in language that strongly indicated either the questioner did not understand the art of eliciting the kind of information wanted, or that he did not know the answer to the question himself. As we look over these early questions now we can well believe that those who framed them were unfamiliar with such work, for some of the questions are wonderful creations of grammatical construction and typography, impressing one with the conviction that if ever any human composition needed the kindly hand of an editor, the examples before us needed such attention.

But happily for the reputation of pharmacy, a great improvement has been made both in the character and form of examinations conducted by boards. Comparison of hundreds of questions submitted to applicants in recent years are indicative of this improvement. In standards of fairness to applicants and to the facts the State operating through the board wishes to establish, no fault we believe can be found, certainly not by the applicant who has acquired his knowledge of pharmacy in a systematic and thorough manner. The National Association of Boards of Pharmacy is entitled to considerable credit for many of the improvements that have been made in the methods of conducting pharmacy examinations.

Training Apprentices for Pharmacist's Mates

How Bluejackets of the Minneapolis Training Station are Broadly Instructed at the University of Minnesota Medical College

By **WILLARD CONNELY, U. S. N. R. F.**

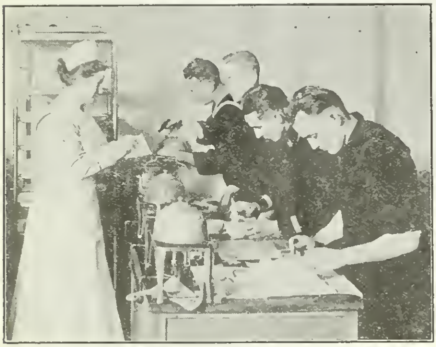
Each hospital apprentice must learn to use the microscope, make cultures of bacteria for examination, and pursue a rigid course in qualitative analysis

SINCE America entered the war, drug clerks and graduates of pharmaceutical schools in widely distributed sections of the country have evinced a continuous enthusiasm to enlist in the hospital corps of the Navy. Men of recognized experience and training are especially welcome in the Service provided they accept the rating to which they are justly entitled. For druggists this is the rating of hospital apprentice first class. Promotion follows quickly enough upon demonstrated ability.

Unfortunately, the naval rank "pharmacist" is wholly misleading alike to the civilian and to the apothecary. A pharmacist in the Navy is a warrant officer, almost an assistant surgeon, a man who has seen ten to fifteen years of practical medical work aboard ship where he has helped to treat contagious or virulent disease in every climate of the globe. He has been head nurse, diagnostician, in charge of the dispensary or sick bay, and aide in the operating room. If his rank could be called "sub-physician" it would more nearly suggest the scope of his many duties than the term "pharmacist."

Likewise the rating "hospital apprentice" does not convey to the druggist or student of pharmacy an understanding of anything like its complete significance. A hospital apprentice is lugubriously thought to be an orderly, because the word "apprentice" implies that the man thus labelled has everything to learn. On the contrary, a man who wishes to enroll in the hospital corps but who is

Naval hospital apprentices at work in the pharmaceutical laboratory of the University of Minnesota Medical College totally unversed in either pharmaceutical work or medical studies is rated seaman second class. After months of grilling disciplinary instruction, together with schooling in elementary medicine and pharmacy (for which he must display an aptitude) he is advanced to hospital apprentice second class. The training goes on, and eventually, upon passing a severe examination, the candidate becomes hospital apprentice first class, qualified to wear the red cross sleeve insignia. Continuing his studies, which develop more and more specialization yet embody remarkable diversity, this man proceeds step by step through the ratings pharmacist's mate third class, second class, first class, and finally he is designated chief pharmacist's mate, an enviable position.



Teaching the art of making flaxseed poultices

Graduate druggists, or students who have completed their "premedical" work in college, may therefore enlist with the advanced rating hospital apprentice first class, and by satisfactory performance of their duties may attain the grade of chief pharmacist's mate as early as the end of their first cruise. Then, if they wish to ship again in the Navy, they are in line for ultimate promotion to pharmacist, and after that, to chief pharmacist.

I have written this rather exhaustive preamble to make clear the status of young men who have taken a course in pharmacy. Their knowledge is assuredly a valuable asset, but in addition they must know a great deal about handling and treating patients, including patients who are suffering injury, before they can be ranked with those officers in the Navy called pharmacists.

An unmatched feature of the U. S. Naval Training Station at Minneapolis is the company of one hundred hospital corpsmen enjoying the rich benefits of instruction afforded in the University of Minnesota medical school. The men of the first company have already been despatched to sea duty or to naval hospitals somewhere on the Atlantic coast; the second hundred are now at work in the college, pursuing a course even broader than that obtained by their predecessors. The new men are taking dentistry, and it is expected to keep them in Minneapolis four months instead of three. At the end of that period they will go up for examination before the board of naval medical officers on the station, for promotion to the rating of pharmacist's mate third class. It is of interest to remark that of the present contingent about one-sixth of the men have been civilian drug clerks or students at pharmaceutical schools. Indubitably the navy hospital corps appeals to men familiar with apothecarial pursuits.

The instruction, six hours per day for five days weekly, is given in the main medical building, at the Institute of Anatomy, the College of Dentistry, the Institute of Pathology, and in the university hospital. No hospital work, however, is given until the second month, as it is held essential that the sailors have first a four weeks' foundation of rudimentary theory.

Of the ten subjects on the schedule, the basic significance of pharmacology is obvious; to pharmacology is devoted one-fifth of the entire weekly program, a greater allotment of time than to any other single study. Pharmacy as taught the navy men, embraces the big field of pharmacology, materia medica, and therapeutics. There are other studies not wholly medical, and of pertinent interest to the druggist, to which I shall refer later. To begin the course in pharmacy, however, six lectures in elementary chemistry are the "openers." Three-fourths of these bluejackets have already had high school chemistry, but it has not been specialized, and moreover a review is a good scheme to check up the memory.

The first lecture, illustrated by demonstration experiments, takes up such general principles as elements, molecules, atoms, valence and the nature of physical and chemical changes. Next physicochemical conceptions are discussed, covering electrolytes and non-electrolytes, the relation of acidity and alkalinity to indicators and conduction, colloids and crystals.

Chemistry of the carbon compounds follows, with valence, combinations, type products in oxidation of methane, alcohol, aldehyde, acid. This talk embodies a survey of substitutions for the methane molecule. Proceeding, chemistry of the benzol ring comes under attention, with a study of Kekule's theory, phenol, toluene, benzaldehyde, benzoic acid; and substitution products anilin, acetanilid, and the war-renowned trinitrotoluene. This primary work concludes with an intensive observation of the chemistry of the common metals, in accordance with Mendelejeff's periodic system. Experiments in the laboratory are performed with the following groups: Sodium and potassium, copper, silver, gold; calcium, magnesium, zinc, mercury; aluminium; carbon, silicon, lead; nitrogen, phosphorus, arsenic, antimony, bismuth; oxygen and sulphur; chlorin, bromin, iodin; iron, nickel, platinum.

General pharmacy is the next step. The men are required to learn unforgettably the metric and apothecaries' weights and measures and to handle with precaution spoons cups, glasses. Symbols and their significance are memorized, as well as forms of prescriptions. Drummed at the students with formidable emphasis is the matter of a pharmacist's responsibility, just as at the hospital the sailors are ordered to look without fail three times at a medicine bottle label—when they take the bottle from the shelf, when they measure out the dose, when they put back the bottle on the shelf. Also under prescription writing are studied the typical liquid mixture, the powder, tablet, pill, salve, and typical methods of flavoring disguising tastes and coloring, winding up with a full warning on the matter of incompatibilities.

By this time the bluejackets are well launched in their training at the hospital too, so that pharmacal instruction in classroom and laboratory is followed up, supplemented, by correlative duties in the wards and operating rooms. The next pharmaceutical consideration is general anesthetics—ether, chloroform, nitrous oxide. The sailors go into the laboratory of pharmacology where each man anesthetizes a rabbit, and is required to bring the animal safely out of the ether. Satisfactorily passing this test the naval apprentice goes directly to the hospital and helps administer the anesthetic to a patient in the operating room.

On local anesthetics the men are given the opportunity to remark the effects of cocaine on reflex contractility and on selective blocking of the nerve trunk. Sub-topics comprise the boiling of cocaine, its toxicity, methods of local anesthesia—by infiltration, by nerve-blocking, and spinal. Practice in cocaine substitutes such as novocaine is likewise taught.

The work on soporifics and sedatives runs through the opium series and morphine, with a demonstration of their modes of administering and their pharmacological effects, the latter in such cases as acute poisoning and chronic morphinism. Codein and heroin are given attention, especially in their relation to morphine, and the antagonism of atropin is stressed, with a view to showing lucidly its important use with morphine, opium and papaverin. An entire lecture is given to the action on brain and circulation of chloral, to the details about "knockout drops," to the hypnotics trional, tetronal and veronal, to the use of sulphonal for insomnia and paraldehyde for tetanus or antimorphinism. Corollary to this talk is a practical period devoted to bromides and their mode of action, including their use in epilepsy and mania. Magnesium sulphate in tetanus and the antagonism of calcium chloride are emphasized.

Antipyretics are studied in their relation to heat radiation and heat center, their uses and abuses, and their effects on the heart and blood. Salicylates, as regards their effects in rheumatism and other diseases, their mode of excretion into joints, their toxic tendencies, and salicylism. Also touched upon are oil of wintergreen, sodium salicylate, and acetyl salicylic acid. It is one thing to talk about all these points from the lecture platform, the sailor druggist may remember or he may be drowsy and forget, but when he is on his toes in the laboratory and sees demonstrated or himself helps to demonstrate these various remedies on animals, he retains such experiments in his memory for all time.

Of all topics in pharmacology, the matter of circulatory stimulants, next prescribed in the course for the Minneapolis hospital apprentices, probably lends itself as well as any to animal demonstration. Under this heading a concentrative study is first made of the physiology of the heart vasomotor center and the blood vessels. Then are taken up the drugs acting on these vessels, adrenalin and the nitrites. The action of nicotine and tobacco on ganglia is noted, and of drugs acting through inhalation such as ammonia and nitrites. Another special group embraces the drugs acting by reflex from stomach—alcohol, aromatic, ammonia, Hoffman's anodyne. The use of these as stimulants for syncope is tested. Digitalis receives prominent notice —its effect on dilated heart, on rapid irregular heart, and the mechanism of its action, with mode of administration and dosage. Eggleston's method and its dangers, and the use of atropin in digitalis poisoning are duly considered.

With the study of drugs acting on the secretion and hollow viscera the anatomy of the autonomic and sympathetic nervous system is explained, together with the physiology and secretions of these viscera, and how the heart rate is affected. To illustrate such points is to observe the general actions of atropin, then in succession the sailors are shown the results of injections of pilocarpin, eserin, papaverin, adrenalin, pituitrin and ergot. With rabbits the therapeutic effects of these drugs on pupils, bronchi, stomach, intestines and uterus are excellently brought out.

"I don't see how you can keep so many rabbits on hand to experiment with," said one of the bluejackets.

Ward management must be learned before the hospital apprentice can be assigned to duty in the sick bay of a battleship

"The rabbits themselves," answered the professor of pharmacology, "are kind enough to assume that responsibility."

A full week is given over to the investigation of purgatives, of which when long on the ocean it is convenient for pharmacist's mates to have a complete "working" knowledge. Every popular purgative is discussed, from a drop of croton oil to a pint of magnesia. The classes—drastic, simple, saline, hydragogue, cholagogue, and laxative—are gone over with best known examples of each modes of administration and dosage in typical conditions. To round off this detail of the course, bismuth and antidiarrheal mixtures are naturally given full measure of attention.

Under bicarbonate of soda and alkali therapy are brought out the treatment for hypochlorhydria, acidosis, and for general maintenance of neutrality in the body. Also are made plain the conditions of diabetes and diabetic coma, uraemia, surgical shock, and the simple remedies or palliatives for each. Specific therapy, following, covers quinine in malaria, ethylhydrocuprein in pneumonia, emetin in abscess, arsenic and the occurrence and treatment of arsenic poisoning. Salvarsan and neosalvarsan in syphilis are given exhaustive elucidation, with warnings on the action of arsenicals, their effects on heart and kidneys. A separate lecture on mercury touches upon its history, its local and general actions, and action on mouth, digestive tract, kidneys, and as a purgative in syphilis, concluding with the relation of mercury to salvarsan. In the dermatology clinic at the University which the sailors attend and assist daily, are treated about 1,200 cases monthly. Here the men learn to diagnose, to inject salicylate of mercury, and to help administer salvarsan.

Antiseptics is the final broad topic in the pharmaceutical course. It begins with the heavy metals, bichloride and copper sulphate, then goes on with formaldehyde, peroxides, iodin, hypochlorites, and eusol. Of particular interest to the bluejackets is their special instruction in the use of Dakin's solution, the Carrel-Dakin treatment and the application of dichloramine-T. All of the newest therapeutic agents and methods discovered or brought into prominence since the war are given detailed attention.

I have now given a condensed review of the pharmacal work done in this short but very comprehensive navy course. Registered druggists and pharmacists may have discovered so far nothing altogether new to them, but it must be remembered that this pharmacotherapy is only one subject of ten studied by the hospital apprentices. The work in the other courses is no less thorough, though to most of them less time is apportioned. It is not germane to the purposes of the ERA that I append a detailed account of the requirements in anatomy, that I tell how each week small groups of the sailors go into the dissecting room and work on tissues, joints, muscles, arteries, the alimentary canal and the nervous system. Nor would I elaborate the work in minor surgery and first aid, nor the hospital corps instruction in the dental college, where the men extract teeth, make and insert temporary fillings, treat pyorrhea, and set dislocated jaws. In bacteriology I need only mention that the bluejackets make stains, prepare slides, develop cultures, learn how infection is transmitted, how to use disinfectants, how to examine water and milk for impurities, and make urinalysis. For physiologic chemistry the studies include the composition, properties and importance of carbohydrates, fats, proteins and inorganic matter, followed by lectures on digestion, the chemistry of urine, and metabolism. Blood, respiration, digestion, absorption, physiology of the skin and heat producers are covered in hygiene and physiology, while the latter entails demonstrations on animals, illustrating muscle and nerve, the nervous system, and the circulation.

The hospital activities in which the sailors are drilled are nursing, bandaging, and cooking for invalids. In ward management the corpsmen learn care of bed, bed linen and appurtenances; how to give baths, hypodermics, and to administer medicines by each of the five methods; preparation and application of compresses, stupes and poultices; preparation for operation; lavage, gavage, irrigations of eye, ear, nose and throat; enemata, catheterization and bladder irrigation, perineal dressings; preparation for venesection, hypodermoclysis, paracentesis of chest and abdomen; technique for surgical dressings, Buck's extension, operation of sterilizers and tanks. The men practise bandaging upon one another. In dietetics they learn to prepare liquid, light, semi-solid and general foods.

If a hospital corpsman makes a good grade in every department of this course, he is considered by the Bureau of Medicine and Surgery and by the University of Minnesota medical school to be good timber for a pharmacist's mate. Commander Warren J. Terhune, U.S.N., Commandant of the U. S. Naval Training Schools in Minneapolis, believes that for efficiency the hospital corpsmen of his detachment will be unexcelled in the service.

The Third Liberty Loan—Make it "Three Strikes and Out for the Kaiser"!

LICORICE ROOT IN SOUTH AFRICA

Licorice root is found in various parts of the Province of Cape of Good Hope. After its introduction to that country a number of farmers planted it and then probably on account of the lack of a market neglected it. Later it so spread in certain localities as to become a pest difficult to eradicate. Now, its usefulness has been recognized and the diggers pay a penny (2 cents) a pound for the privilege of digging it.

The quantity available in South Africa for export is very limited and will never seriously compete with the supplies coming from Asia Minor, Syria, and Mesopotamia, where it has grown and spread for centuries. If it were not that Asiatic supplies have largely been shut off on account of the war it is probable that the higher cost of labor would make it unprofitable to harvest it in South Africa.

Balata, a gum similar to gutta-percha, largely used in the manufacture of belting, is obtained from the sap of *Mimusops globosa*, a tree reaching 100 feet or more in height, which is widely distributed over eastern Venezuela and the Guianas. The latex is secreted between the bark and the wood of the tree; it contains nearly equal proportions of resin and gutta, the latter being identical with true gutta-percha. The word "balata" is of Carib origin and is always applied by the natives to the gum, the tree being known as the purguo.

The Kaiser Started This.
You End It—Buy Liberty Bonds.

Kultur Versus Culture*

By **PROF. HENRY KRAEMER**, University of Michigan.

THE main subject of my lecture is "Kultur vs. Culture." I shall take up one phase of it, and one which I do not believe has been touched upon in the discussion of this war. We must look to our educational institutions not only for the development of man's powers of production, but also in giving direction and balance to the achievements of men. It is not sufficient that a nation achieve material prosperity and exert an influence upon the intellectual life of the world, but it is far more important that the leaders of thought exert a stimulating influence for the development of those higher qualities of heart, without which every life is barren and sterile, no matter how epoch making are the products of individual initiative or genius. Up to the time of entering our American universities, students being at home are usually to some extent under the direct surveillance of their parents. When a young man goes to the university, however, he must to a very great extent arrange his own program for the conduct of his life and according to the influences of his associates and environment his character is developed. He cannot escape being affected by what Matthew Arnold has termed "the voices in the air." If they appeal to his nobler nature he will become not only a scholar but a man. If they appeal to his lower instincts he will be debased and enter life minus refinement and culture.

Prof. Henry Kraemer

If I am not misinterpreting conditions there is something radically different in the conduct of the universities of Germany and the United States. The pulse of the university is the student life, and his activities in recreation to a large extent indicate the purposes of his education. It seems to me that in the student life in Germany there is a morale which while it cultivates the intellectual qualities of men is demoralizing to their finer instincts. This leads us directly to the discussion of the difference between Kultur and Culture. Kultur means the subjugation of nature, the control of natural forces whether in the waterfall or the individual. It means the diverting of all of nature to one's own interest, and the subjugation of everything to one's own dominion. Culture, on the other hand, has for its basis self-improvement, self-control, self-development, the cultivation of one's own character that he may respect the wishes and positions of others. Culture means the development of the highest qualities of mind and heart. One of the buildings of Princeton University bears the inscription "Studia abeunt en mores" ("Studies are to make men"), which motto we may take as the ideal of American university education. In Germany studies are to make soldiers and conquerors. In this analysis we may discern the evil principles which have misled a nation which should have been the proud boast of a great civilization.

Before a German student goes to the university he usually has led a Spartan's life. He has experienced the hard and grinding discipline of the gymnasium, and been subjected to hardest and dullest kind of routine by both parents and teachers, and his pleasures have been few and very restricted. When he comes to the university he finds that all restrictions are thrown to the winds. He is the master of his environment, and he expects to enjoy what is known as "Akademische Freiheit." He is expected to spend his first year in becoming familiar with the traditions, ideals and principles of the *Corps* or *Corporations*. *"Frei ist der Bursche,"* "Free is the lad," has been the catch phrase in song and talk of the German students for over 200 years. The *Corps* correspond in one sense to our fraternities, and yet they are different in their motives and principles. The *Corps* have a three-fold object. First, to encourage goodfellowship among the students; second, to further his enjoying "Akademische Freiheit"; and third to prepare him for fighting for country and Kaiser, and to this the other two functions are always subservient. Harte in his book on German universities has well said, "We should do the German student great injustice by ignoring his antecedents. His virtues are his own, his vices inherited." The young men upon entering the university may dread, and shudder at the prospects ahead of them, and yet, having heard the stories of Freiheit and Drunkenness and Duelling, participate in it all as a part of their education. During the first year or so the young man, with the early lessons of culture and refinement ever before him, would find it almost impossible to participate in the duels and all other bloody work expected of a member of the Corps. He is therefore prepared for this by being made over again so that his moral sense is blunted and when the reaction is complete he is ready for the remainder of his training. He is groomed during his first year in all that savors of immorality. One of the first things that he must be able to do is to drink a specified quantity of beer in a specified time, the quantity being somewhere between twenty and thirty large glasses in one sitting of from four to eight hours, generally from nine o'clock in the evening to some hour in the morning. The object of this drinking is for the student to display endurance and ability to undertake a difficult personal problem and master it. In other words, "Akademische Freiheit" means license for one to absent himself from studies and live the life of freedom and debauchery, such as his predecessors have lived for two hundred years.

After the student has spent two or three semesters in preparation to meet his obligations as a member of the Verein, he is ready to proceed farther in the work of the Corps and participate in the duels. Duelling is prohibited by law in Germany, but the law is a dead letter. It must not be thought that the laws of Germany are not rigorously upheld. In the case of the duel, however, it is generally conceded that to fight without flinching and the suffer pain without murmuring makes a man of the student. Furthermore, so long as the Kaiser and eminent men like Prince Bismarck and others in authority have praised the duelling practices of the students, it is no wonder they are maintained, although proscribed by law. The law is very convenient in case the wounds are serious and death results to one of the contestants. The object of the duel is to develop courage, to cause a student to look a foe straight in the eye without flinching. A man may be drunk under the table, as it is said, after a drinking bout, without affecting his reputation, but in a duel he dare not even wince no matter how heavy the blows may be. You can readily see that the Mensur is brutalizing and that it excites pugnacity—in fact it is intended to develop the fighting spirit. That this sort of a ritual, however, is not necessary in the development of courage and manhood is evidenced by the fact that in America young men of good family learn to stand up straight and hold their own in a fight without wasting a year or more in professional brawling and later in duelling, becoming thereby disfigured for life. It is rather clear that the object of the duel in Germany is to keep their educated men under subjection to the war spirit. If the universities not only proscribed duelling but abolished it, the men of learning would shrink at war and would be horrified to participate in it the same as the thinking men of any other country.

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*Portions of address delivered before the American Drug Manufacturers' Association.

It is a wonderful system that can evolve from the brightest minds and the purest hearts of the youth of Germany a product which is so calloused and heartless and venturesome that it descends to this brutalizing type, which makes for the destruction of everything that interferes with its onward course. It is rather remarkable than an institution of this kind should develop under University influence.

One would think that the judgment of the faculty would interfere with its continuation, but if you think that Akademische Freiheit means that there is freedom on the part of the faculty, you are very much mistaken. There is academic freedom, but it stops at that point where it interferes with the development of the processes and objects of the State. The faculty could not interfere with the institution of duelling which has for its object the training of men who shall give battle for their country. You would think that the students themselves would have sufficient discretion to overthrow an institution which perverts their ideals and ambitions in the development of the human character, for after all character is a greater possession than intellectual riches or the wealth of the State. But students are caught at that impressionable age when a reaction is inevitable after the strenuous life of the gymnasium, and they are so caught in the maelstrom that before they realize it they are subjugated body and soul in the service of the State. As they compare their duelling with the hunting with hounds in England or our athletic diversions such as football, they say, "With this you kill people too, and the loss through death is just as great in your diversion as by duelling." They forget, however, that in our forms of recreation whether they be boxing, football, baseball, or any other sport, the object is not to injure, but to attain a definite goal, and if there is injury to a fellow athlete or sportsman it is merely incidental and regretted by all. When the German makes a comparison of Football and the Duel he shows that he does not realize what he is doing in his Mensuren, and that he misses the great object of any form of sport, just as he seems to have missed the main object of life. In football the object is to goal the ball and not to injure any one. For, as Walter Camp says: "It has the primitive virtues of intense masculinity and the attention of the witness at critical moments. Any game that can affect the spectators as does football must have great vitality in it."

The whole German life, from the lullaby of the mother to her infant, to the songs in the school room, the university and the church, all bespeak of the soldier and of the battle. When the student comes to the climax of his career at the university, presenting his Doctor's thesis, he is expected to defend it with sword in hand against the criticisms and attacks of the members of the faculty. The sword is the highest emblem in the ideals and precepts of the brainiest man of the German university, as well as the peasant who works in the fiields. Their thinking is that even righteousness is in the nature of an actual battle. In the following few lines you may discern the danger of this point of view to the uplift of mankind and the progress of the human race:

Ein Kampf muss uns noch werden
Ein letzter grossen Sieg;
Der letzte Kampf auf erden,
Der letzte heilige Krieg.

While I was a student abroad I did some travelling and was a few times away from beaten paths and saw the remarkable resources and the productiveness of a centralized government such as Germany's. This picture of the forests of Germany merely typifies the fact that there is hardly a square foot in the whole kingdom that is not under direct surveillance. The hillsides are covered with forests, on either side of the roads you will find useful trees. Every product of nature is utilized and the maximum yield is obtained from nature as well as from the energies of men. At Bingen-on-the-Rhine this beautiful stream that has been the inspiration of travellers to this part of the world. I show it to you tonight in concluding this part of my lecture for this reason. A short time ago one of my friends suggested that I become a member of an organization in this country whose object is to educate the Germans in democracy. After realizing what tools we had been in the spread of German ideas in this country, I could not believe that there was any one who would continue in this sort of propaganda, for it seemed to me that the sooner we desisted from the spread of German ideas in this country, and the sooner we made up our minds that our efforts to educate the German people in democracy would be futile, the better it would be for democracy and civilization. I said in my reply, "As far as I can see, the only way to teach the German people democracy is to drive the German army across the Rhine and to imprison the Kaiser on some St. Helena." I may be permitted to repeat the lines of that song which has lately come to my notice and which may appeal to you as it did to me.

"Somewhere in France is daddy,
Somewhere in France is he;
Fighting for home and country.
Fighting for Liberty.
I pray every night for the Allies,
And ask God to help them to win,
For Daddy won't come back
Until the Stars and Stripes they tack
On Kaiser Wilhelm's flagpole in Berlin."

But my thoughts of my return twenty years ago took a more personal view, and I naturally reverted to our pioneers, the men of brawn and brain who had made our country what it is. It was not until this time that I comprehended why Agassiz, the foremost zoologist of the world, should come to America many years ago to make this his home. He refused the proffers of professorships at Geneva and Zurich, and, even though he was far removed from the large museums and libraries and even the stimulus of co-workers in Europe, he saw the possibilities in this country, not only for an original scientist,

(*Concluded on Page* 115)

THE QUESTION BOX

The "How to Do It" Department

Conducted by Pharmaceutical Experts

For the benefit of ERA Subscribers

Hippuric Acid: Sodium Hippurate

(F. S. T.)—According to the books, hippuric acid may be obtained from the urine of herbivorous animals, or it may be prepared synthetically by the action of benzoyl chloride on amino-acetic acid. It occurs in colorless crystals, having a melting point of 187° C., which are soluble in water, alcohol and ether. The acid is also soluble in solution of sodium phosphate. It is employed chiefly in the form of its salts of sodium, lithium and ammonium, which are administered with the object of lowering blood pressure. The conversion of benzoic acid into hippuric acid in the body is a fact substantiated by all physiological chemists, it being stated that the conversion appears to partake of the nature of a protective process, the hippurates being rapidly absorbed and excreted, and having no toxic action.

Sodium hippurate may be prepared by careful neutralization of a solution of sodium carbonate with a solution of hippuric acid in hot water, evaporating the resulting solution to dryness, dissolving the residue in alcohol and crystallizing therefrom several times. Sodium hippurate occurs in the form of a slightly yellow mass with a distinctly crystalline structure, or as a greyish-white, amorphous powder, odorless, and having a faint, alkaline taste. The aqueous solution gives a cream-colored precipitate with solution of ferric chloride; with silver nitrate and mercurous nitrate, white curdy precipitates. Mineral acids decompose the salt with separation of hippuric acid in crystalline state. Specifically, sodium hippurate has been recommended for use as a solvent of uric acid in gout and rheumatism and to lower the blood pressure in arterio-sclerosis. The dose of the acid is 5 to 15 grains, and of sodium hippurate, 5 to 30 grains.

Venetian Theriac

(J. L. H. & Co.)—"Venetian Theriac," also known as Theriaca Andromachi, is the name applied to an ancient alexipharmic electuary, consisting of 61 different ingredients, which possessed the most opposite properties. In the palmy days of the Venetian Republic it was extensively manufactured at Venice and exported to London, where it would appear the name Venetian Theriac was given to it. In the process of time the formula underwent many modifications; the theriaca of the London Pharmacopoeia of 1746, referred to above as consisting of 61 ingredients, containing one grain of opium in 75 grains, that of the Paris Codex consisting of 72 ingredients, containing 1 grain of opium in 72 grains; that of the Edinburgh Pharmacopoeia of 1744 consisting of 10 ingredients, with 1 grain of opium in every 100 grains, the formula being as follows:

Take of serpentary root, 6 ounces; valerian and contrayerva roots, each 4 ounces; aromatic powder, 3 ounces; guaiacum resin, castor, and nutmeg, of each 2 ounces; saffron and opium (dissolved in a little wine), of each 1 ounce; clarified honey 75 ounces; reduce all the dry ingredients to a fine powder then mix them.

This preparation in its various modifications has entirely disappeared from modern medicine, about the only representatives of these polypharmical compounds being the electuaries or confections of opium to be found in various foreign pharmacopoeias. In Great Britain at the present time the name "theriaca" is frequently used synonymously with "treacle," the uncrystallized residue from the refining of sugar, sometimes used as a pill excipient and in the preparation of "Chlorodyne," B. P. Codex.

If one cares to go over the medical and pharmaceutical formularies of a century and a half ago he can find the most curious variants of the formulas we have endeavored to typify in the above.

Books on the Metric System

(T. B.)—It is somewhat difficult to give a list of books on the metric system that is most likely to cover just the phase of the subject one most desires. For an adaptation of the system to pharmacy the tables and explanatory matter in the Era Dose Book will be found serviceable. Among other books that may be named are Halloc and Wade's "Outlines of the Evolution of Weights and the Metric System, $3; O'Connor's "Metric System for Druggists," recently published at 50c, also contains some information from the druggist's point of view, while one of the best presentations on the subject for any purpose is that published by the Bureau of Standards, Washington, entitled "International Metric System of Weights and Measures," which may be obtained of the Superintendent of Public Documents, Washington (price 10 cents).

The tables in the Pharmacopoeia are also helpful.

Books on Dyeing

(T. D. R.)—No information is given as to the character of the dyeing, nor as to whether the fabric is cotton, wool or silk, the processes employed being varied to suit the fibre and the specific results to be obtained. However, the following books are recommended as fairly well covering the subject:

Beech, Dyeing of Cotton Fabrics	$3.00
Beech, Dyeing of Woolen Fabrics	3.00
Owen & Standage, Dyeing and Cleaning of Textile Fabrics	2.00
Dyer and Color Maker's Companion (contains upwards of 200 receipts for making colors, etc.)	1.00

There are also many other standard works on dyeing, some wholly devoted to synthetic dyes, but which are designed for the manufacturer and dyer on a large scale.

The manufacture of plastic compositions is somewhat out of our line, but we have been informed that the substance mostly used for the purpose of making cheap beads, etc., is vegetable ivory, derived either from the kernel of the palm fruit or other vegetable source. The potato has also been similarly employed, but the details of the manipulation we are unable to give. An ivory substitute mass has thus been described, but so far as we can discover, the process would have to be worked out experimentally, as no proportions are given. Quicklime is treated with sufficient water to convert it to a hydrate, adding to it, just before it becomes completely hydrated, aqueous solution of phosphoric acid, incorporating, while thoroughly stirring, small quantities of calcium carbonate, magnesia and alumina, and finally, gelatin and albumen dissolved in water. The resultant plastic and intimately mixed mass is set aside to allow completion of the action of the phosphoric acid upon the chalk. A day later, while the mixture is still plastic, it is pressed into the desired form and dried in a current of air at about 150° C., when after being kept for three or four weeks it becomes perfectly hard. The ingredients of the mixture, which can be colored by the addition of suitable substances, are quicklime, 100 parts; water, 300 parts; phosphoric acid solution (sp. gr. 1.05), 75 parts; calcium carbonate, 16 parts; magnesia, 1 to 2 parts; alumina, precipitated, 5 parts; gelatin, 15 parts.

Elixir of Acetanilide

(O. L.)—Fenner states that several differing preparations under the above name are found in the market, the two most in demand being the following:

(1)

Acetanilide	160 grains
Salol	64 grains
Phenacetine	128 grains
Citrated caffeine	64 grains
Tartaric acid	32 grains
Sodium bicarbonate	196 grains
Elixir, sufficient to make	1 pint

Mix, dissolve and filter.

(2)

Acetanilide	256 grains
Caffeine	32 grains
Sodium bromide	640 grains
Codeine sulphate	8 grains
Tincture of gelsemium	384 minims
Elixir, sufficient to make	1 pint

Mix dissolve and filter.

Dose, 1 to 2 fluidrams.

Medicinal Properties of Horseradish

(V. L. P.)—Horseradish root, in this country at least, has been more extensively used as a condiment than as a medicine, but that it does possess remedial properties, seems to be a well established fact, certain pharmacopoeias listing it as official and providing formulas for various preparations made therefrom, while the U. S. P. recognized it in the materia medica list of the various editions from 1820 to 1860. The root contains the glucoside sinigrin (potassium myronate), which is decomposed in the presence of water by the enzyme myrosin, which is also present in the root The products of the decomposition are a volatile oil (allyl isothiocyanate), acid potassium sulphate, and dextrose. The root also contains resin, sugar and starch. The French Codex contains a formula for compound syrup of horseradish under the name of "sirop de Raifort compose," formerly known as "sirop antiscorbutique." The British Pharmacopoeia gives the following formula for "Spiritus Armoraciae Compositus"; Horseradish root, scraped, 12.5; dried bitter orange peel, well bruised, 12.5; nutmeg, bruised, 0.315; alcohol, 62.5; distilled water, 75. Mix and distil 100. This preparation is used in atonic dyspepsia and to improve the appetite. Dose, 1 to 2 fluidrams.

Count that day lost—whose low descending sun
Sees in your hand no Liberty Bond or Gun

Books on Coal Tar and Ammonia

(T. D. R.)—General information on the manufacture of coal tar products can be best given by the chemical engineer, but it is probable that you can find most of the facts you are in search of in any of the recent standard works on the manufacture of coal tar and ammonia. The most recent and authoritative book on the subject is that by Lunge, "Coal Tar and Ammonia," published in two volumes (not sold separately) at $15. The various chapters cover all phases of the operation of distilling, ammonia recovery, and the production of the different related compounds. Other works are: Wagner, "Coal Gas Residuals," $2.50; Butterfield-Atkinson, "The Chemistry of Gas Manufacture." In two volumes, Vol. I (all so far published), "Materials and Processes," $2.50; Sadtler, "Handbook of Industrial Organic Chemistry" $5.50. (This volume contains a very good section on destructive distillation as applied to the manufacture of gas and ammonia).

Massage Cream

(H. B. M.)—The casein for the manufacture of these creams may be purchased in the dry condition in the market, or it may be precipitated from milk by means of an acid, alum, or rennet. We give the formula below where hydrochloric acid is used as the precipitant, although salicylic acid might be similarly employed if desired. Some experimenting is necessary to determine the quantity required, preferably skimmed milk should be used, or the fatty matter should first be separated. The presence of any butter fat in the products tends to induce rancidity.

Skimmed milk	1 gal.
Hydrochloric acid	1 fl. oz.
Boric acid, powder	1 av. oz.
Diluted alcohol	20 fl. oz.
Oil of bergamot	20 drops
Oil of rose geranium	30 drops
Sweet almond oil	4 fl. dr.
Solution of carmine, water, each	sufficient

To the milk add one gallon of water hot enough to raise the temperature of the mixture to about 80° F. Mix the hydrochloric acid with one pint of water and add this to the diluted milk slowly and with constant stirring. Allow the liquid to stand for an hour, collect the precipitate on cheese-cloth, allow it to drain, return it to the vessel and add 2 gallons of water. Agitate the liquid thoroughly, breaking up the masses of coagulum, and again drain as before. Repeat this washing and draining until the casein is free from acid and whey. Finally rub up the casein in a mortar with boric acid until well mixed, again transfer to a cheese-cloth bag and allow to hang suspended for 36 to 48 hours, squeezing the bag occasionally, until the casein is quite dry. Transfer the dried and granular casein to a mortar, triturate it till smooth, adding the diluted alcohol to facilitate the process. When well rubbed out, incorporate the sweet almond and aromatic oils and tint sufficiently with carmine solution. Then add water enough to form a soft paste and triturate together until well mixed. It is said a perfectly smooth paste product will not be obtained until it is ground in a paint mill. It must be bottled at once to prevent drying out in suitable jars, or it may be put into collapsible tubes.

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The Progress of Pharmacy

Sodium Polyphosphate—

This name has been proposed for $Na_4P_6O_{17}$, a new acid sodium phosphate, prepared by evaporating mixtures of sodium hydroxide or carbonate with phosphoric acid and heating the residue finally to a bright red heat in a muffle. The product is a vitreous mass, slowly soluble in cold water, more rapidly dissolved on warming. The solution is nearly neutral to both phenolphthalein and methyl orange. It is difficult to obtain the pure salt, since it has a powerful corrosive action, especially near its melting point, on vessels of all material. Platinum used with it, it is stated, becomes so brittle that it may be torn like paper, while nickel was attacked until the mixture consisted entirely of nickel and sodium pyrophosphates. Glaze of porcelain was badly corroded, alkalies being removed, and silica liberated; even quartz dishes were perceptibly attacked and silica contaminated the salt contained in them. (*Jour. Soc. Chem. Ind.*)

Cinchona robusta vs. Cinchona succirubra—

At the Pharmaceutical Science Conference held at Arnheim, Netherlands, Professor L. van Itallie and Dr. H. J. Lemkes discussed the question of the superiority of *Cinchona robusta* over *Cinchona succirubra*, as a producer of pharmaceutical bark. For factory purposes, the bark of *C. robusta* has been proved to be richest in quinine. In regard to its use in pharmacy for the preparation of extracts, tinctures, etc., the total alkaloidal content must be considered in addition to the quinine content. However, it was impossible to extract more than 50 per cent. of the alkaloids, and the conference concluded that before the question could be decided and the present quality of extract be brought to the highest possible standard, a thorough investigation into the combining form in which alkaloids are present in the bark would have to be instituted.

Use of Soy Bean as Food—

Osborne and Mendel's study shows that the soy bean is relatively poor in calcium and chlorin *Jour. Biog. Chem.* through *Jour. A. M. A.*). The addition of a small amount of calcium carbonate to a food in which the soy bean was the sole source of mineral constituents tended to stimulate growth to some extent, although not so efficiently as the addition of the more complex salt mixture sometimes employed. On diets containing either the soy bean meal or the commercial soy cake meal, together with fats and "protein-free milk" or the authors' "artificial" salt mixture, several broods of young have been produced, and these young have grown normally on diets the same as those on which their parents were raised. This is a further demonstration of the nutritive efficiency of this legume, in striking contrast with the adverse results obtained with kidney beans and garden peas. The soy bean is the only seed hitherto investigated, with the possible exception of flax and millet, which contains both the water-soluble and the fat-soluble unidentified dietary essentials or vitamins. This fact, taken with the high physiologic value of the protein, lends a unique significance to the use of the soy bean as a food.

Solubility of Calcium Carbonate in Boiling Water—

A. Cavazzi shows in a series of experiments that the discrepancy in the statements heretofore made with reference to the solubility of calcium carbonate in water at 100° C. is due to the fact that calcium carbonate is slowly dissociated by boiling water, with loss of carbon dioxide. For this reason it is not possible to obtain a solution containing only calcium carbonate in boiling water. This dissociation does not continue indefinitely, and may be checked by adding to the boiling water in which the calcium carbonate is suspended about 15 Cc. of a solution of lime (saturated at the ordinary temperature). The substance found in the solution after long continued boiling of calcium carbonate with water consists almost entirely of free lime. Other factors which have an influence upon the proportion of free lime which dissolved are the volume of liquid and the concentration of the solution. The addition of a small amount of sodium carbonate prevents the dissociation and the solution of calcium carbonate in boiling water. It is stated that calcium carbonate produced by chemical reactions in aqueous solutions at low temperatures forms saturated solutions, the stability of which depends mainly upon the concentrations and the temperature—(*The Analyst*).

New Tests For Bismuth and Iodides—

E. J. Evans describes a new test for bismuth and iodides in a recent issue of *Pharm. Jour.* Make a solution of any alkaloid—quinine, for example, acidify with strong hydrochloric acid, and add a small quantity of potassium iodide. This solution is a delicate test for bismuth salts. On adding a few drops to a solution of any bismuth salt, an orange-red precipitate is formed. Again, to the hydrochloric solution of the alkaloid add solution of bismuth. This solution forms a test solution for iodides; an orange-red precipitate results when it is added to an iodide solution.

German Substitute For Lycopodium—

The use of lycopodium in pharmacy for the purpose of facilitating the rolling of pills and of preventing the adhesion of pills when formed is well known, while it has been extensively used as an absorbent application to excoriated surfaces, as in infant powders, etc. Before the war, lycopodium was extensively used by moulders in Germany for dusting or coating the moulds in order to prevent sand from clinging to castings. As the war progressed, supplies of this material became exhausted, and it became necessary to cast about for a substitute. The subject was taken up by the German Foundrymen's Association, and as described in a recent issue of the London *Ironmonger*, experiments showed that by a centrifugal process the dust, which is precipitated in the lignite briquetting works from the gas exhalations of the drying apparatus, can be successfully used to replace lycopodium for the purpose named. The light dust particles, which contain a large percentage of paraffin, have the same properties of lycopodium, as may be seen when water is poured on them.

Poisonous Gases in a Closed Garage—

Frequent accidents have been reported from time to time from the effects of inhaling the poisonous gases evolved in the products of combustion in internal explosion motors. The element of danger is always present, especially where these gases are exhausted into a confined space, such as the pit containing a pumping engine, or a small private garage. Wood, in a recent issue of the *Medical Record*, suggests a very simple and inexpensive device which, it is claimed,

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will greatly reduce the danger, if not entirely eliminate it. The plan is to bore through the garage door, at a point about opposite the exhaust pipe of the car when in its usual position, a hole 2 or 3 inches in diameter, closed, when not in use, by a wooden drop-cover on the inside. A piece of light metal piping of any kind, just large enough to be shoved over the exhaust pipe of the car, is kept in the garage. When the car is to be started, this pipe is first pushed out through the hole, and then drawn in and passed over the end of the exhaust pipe. As many druggists operate either pleasure cars or automobile delivery wagons, the suggestion as to how the danger from the inhalation of the gaseous products of combustion evolved in starting the motor in a small garage behind closed doors can be eliminated is of value.

Mercurophen, a New Mercurial Germicide—

Schamberg has introduced a new mercurial germicide under the name of "mercurophen," which is stated to be sodium oxymercury-orthonitrophenolate, a compound containing 53 per cent. of Hg. It is described as an odorless brick-red powder, freely soluble in water, giving a yellow solution. It is said to be thirty times as powerful as mercuric chloride, with only about one-fifth its precipitating power on serum proteins. Solutions of 1 : 5,000 have no tarnishing effect on instruments, and its toxicity is much lower than mercuric chloride. (*Jour.* A. M. A.)

Bismuth-Iodoform-Paraffin Paste—

Bismuth-iodoform-paraffin paste, which has become quite widely known to the medical profession under the abbreviated name of "Bipp," consists of bismuth subnitrate, 1; iodoform, 2; and liquid paraffin, q. s. to make a paste. It is used as a dressing, being applied freely to the wound, which is entirely filled with the paste and dressed with sterile gauze. In preparing the paste great care must be taken to ensure freedom from grit.

Erasive Soap—

White soap	8 ounces
Borax	1 ounce
Sal tartar	1 dram
Oil of sassafras	1 dram
Water	8 ounces

Cut the soap into shavings and dissolve in the water by the aid of heat on a water bath; add the borax and sal tartar and boil the mixture until reduced to 1 pound; while cooling, add the oil of sassafras and make into cakes of about two ounces.

Poisonous Exhaust Gases—

The Department of Health of New York City is investigating the poisonous character of the gases discharged by the exhaust pipe of internal combustion engines. In two cases prominently mentioned in the newspapers the victims kept the engine of the automobile running while the car was in a small garage whose doors were closed. These accidents call renewed attention to the poisonous character of the exhaust gases, and should serve as a warning to all car owners. Incidentally they emphasize the danger of using the exhaust gases for heating purposes, as is done in some public conveyances.

Ural—

Analysis of a sample of this specialty by the Bureau of Chemistry showed that it was a solution of volatile oils in balsam. According to Notice of Judgment No. 5085, the article was misbranded in that certain statements were made in the circular accompanying the same falsely and fraudulently representing it as a remedy for the kidneys, bladder and urethral canal, etc., the court imposing a fine of $50.

Manufacture of Formaldehyde—

A new method of manufacturing formaldehyde has been patented in Great Britain, the reaction being performed in a vessel in which a mixture of methyl alcohol is subjected to the action of catalytic agents and heated by a suitable electric heater instead of gas or fire.

Oil Content of Citrus Fruits—

Wilson and Young describe a new method for the determination of the volatile oil content of citrus fruits in a recent issue of the *Journal of Industrial Chemistry* as follows: The whole fruit is cut up and thoroughly mixed, and 200 grams are mixed with 700 cc. of water, the mixture being then rapidly distilled in a current of steam. The distillate is collected in a specially designed oil flask holding about 200 cc., having a neck containing about 2 cc. and graduated in 0.1 cc. divisions. After collecting about 200 cc. of the distillate, hot water is added to bring the oil up into the neck of the flask, which is then centrifuged, and the volume of the oil read. The volume multiplied by 0.849, the average sp. gr. of California lemon oils, and by 0.996, the factor for determinations made at 25° C. in air, gives the weight in oil. Determinations of oil in the peel gave lower results than those obtained with the entire fruit.

PHARMACY PRE-REQUISITE IN VIRGINIA

Wortley F. Rudd, acting chairman of the School of Pharmacy, Medical College of Virginia, Richmond, informs the Era that by unanimous vote in the Senate and a majority of fourteen in the House, the prerequisite pharmacy bill now needs only the signature of Governor Davis to become a law in Virginia. Conservative Virginia, Prof. Rudd believes, will be the eleventh state in the Union to say that the future pharmacists must be adequately educated.

The bill as passed had the support of the Virginia Pharmaceutical Association, the State Board of Pharmacy, and the Medical Society of Virginia, while many individuals and groups of individuals worked for the passage of the measure. Prof. Rudd states that it is difficult to name those who contributed most to the success of the bill, but public recognition should be given Senator Thomas S. Henning, Representatives R. S. Martin, C. H. Rolston and John Q Davis and Messrs. John E. Jackson, Charles D. Fox, Frank C. Larrabee, William P. Harrison and E. L. Brandis.

MEDICAL SUPPLIES FOR BRITISH ARMY

The British army estimates for 1918-19 introduced in the House of Commons, last week, show the following medical supplies in the list of requirements: Bandages, 67,000,000; quinine, 2,000,000 ounces; tetanus anti-toxin, 1,250,000 ounces, and cotton wool, 4,700,000 pounds.

Crude glycerin at the annual rate of 1,800 tons has been recovered from by-products alone and sold to the Ministry of Munitions for the manufacture of 18,000,000 shells. Animal fats largely used by troops in lieu of margarine have been made use of, and we recovered from by-products alone, last year, crude glycerin to the approximate annual rate of 1,800 tons. This glycerin was sold to the Ministry of Munitions for the manufacture of shells. The work will now be carried on by a salvage board, which is charged with the duty of recovering for the manufacture of supplies any kind of material that might be available.

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New Books for Pharmacists

THE DISPENSATORY OF THE UNITED STATES OF AMERICA, 20th edition, thoroughly revised, largely rewritten, and based upon the 9th revision of the United States Pharmacopoeia and the British Pharmacopoeia, 1914. By Joseph P. Remington, Ph. M., F. C. S., late professor of theory and practice of pharmacy in the Philadelphia College of Pharmacy; chairman of the Committee of Revision of the Pharmacopoeia of the United States of America; Horatio C. Wood, Jr., M. D., professor of pharmacology and therapeutics in the University of Pennsylvania; vice-chairman of the Committee of Revision of the U. S. P.; Samuel P. Sadtler, Ph. D., LL. D., former professor of chemistry in the Philadelphia College of Pharmacy, etc.; Charles H. LaWall, Ph. M., associate professor of theory and practice in the Philadelphia College of Pharmacy, etc.; Henry Kraemer, Ph. G., Ph. D., professor of botany and pharmacognosy in the University of Michigan, etc., and John F. Anderson, M. D., director of the research and biological laboratories of E. R. Squibb & Sons, member of the Committee of Revision of the U. S. P., etc. 7½ x 10½ inches, 2010 pages, buckram, $12 Philadelphia, J. B. Lippincott Co.

To fully appreciate the influence of the United States Dispensatory on the progress of pharmacy in this country, one would have to go back eighty-five years ago when the first edition was published under the direction of Dr. George B. Wood and Franklin Bache, both of whom in an eminent degree possessed the qualifications for the preparation of such a work. From the first the book has been looked upon as final authority for information relating to medicinal substances and the methods used in the preparation of drugs, the first edition also bringing to the attention of American physicians and pharmacists the fact that although we might be dependent upon the outside world for some remedies, we had in this country a materia medica and the knowledge of it was not to be kept as a sealed book. This Dispensatory through all the various editions has presented the latest accepted knowledge relating to drugs and medicines, and this is the dominating feature of the 20th edition now before us.

It is no small task to write and revise a commentary like the United States Dispensatory; it requires on the part of those who would undertake such a task special training and almost encyclopedic knowledge of the many co-related subjects, the field covering in its immensity the whole range of pharmacy, chemistry, botany and therapeutics, beside many special branches. The names of the men given on the title page who have contributed to this work are sufficient proof that nothing has been left undone to present the most recent information concerning the identity and uses of drugs and chemicals. The work of eminent specialists is seen on every page, while there will be found the principal facts relating to all of the drugs and preparations of the U.S.P. IX, the N.F. IV, and the British Pharmacopoeia of 1914, besides descriptions of all unofficial substances important to the professions of pharmacy or medicine not included in the three standards just named. The increasing importance of bacterial therapy in the practice of medicine is reflected in articles from the pen of Dr. John F. Anderson, formerly director of the United States Hygienic Laboratory of the U. S. Public Health Service, on vaccines, antitoxins, serums and similar products.

Among other features of this new edition are an abstract of all the regulations and decisions of the United States Department of Agriculture for the enforcement of the Food and Drugs Act, arranged so as to meet the needs and convenience of manufacturers and retail pharmacists; an extensive list of references to the literature that has been drawn upon in the preparation of the book, thus enabling anyone who is interested in a particular subject to consult the original sources of information, more than 200 journals being quoted; a voluminous number of synonyms of official and unofficial drugs in most modern languages; official tables of weights and measures; tables of specific gravities of different percentages of alcohol, acids, etc.; of thermometric equivalents, atomic weights, official formulas for the preparation of test solutions, diagnostic reagents, biological assays and similar subjects. Other features which will commend themselves are the insertion of alternative quantities in the formulas of the official preparations, the use of diacritical marks as a guide to pronunciation, and the list of official preparations at the close of the descriptions of each official drug. The dose of each drug is also given at the end of each article in a separate paragraph, the uniformity of location enabling the user of the book to quickly find this information when needed. A summary of the incompatibilities of each important drug is also given, the aim being to give physicians and pharmacists this very necessary information in a form for ready reference and use.

Taken in its entirety, the pharmacist will find this new edition of the United States Dispensatory an encyclopedic repository of facts relating to medicine and pharmacy, for it covers practically every field of technical importance to practitioners of these arts. The publishers have spared no pains to present a book in keeping with the demands of the times and every pharmacist should feel proud to own a copy.

TECHNICAL HANDBOOK OF OILS, FATS, AND WAXES. By Percival J. Fryer, F.C.S., Soap and Glycerine Works Manager and Chief Chemist, Lecturer in oils, fats and waxes at the Polytechnic, London, and Frank E. Weston, B.Sc. (1st Hons.), F.C.S., Head of the Chemistry Department, the Polytechnic, etc. Volume I, Chemical and General, 8 vo., 279 pages, with 35 illustrations and 36 plates. Cloth, $3 (Cambridge technical series), New York, G. P. Putnam's Sons.

This volume will appeal to the technical worker, the works chemist, and others less directly concerned in the technology of the oils, fats and waxes, as in it the endeavor has been made to explain in as simple manner as possible the theoretical basis upon which the technical processes rest, as well as to describe the various reactions concerning the industry. The book is divided into six sections, Section 1 being introductory and in which are discussed some of the fundamental principles of chemistry as they relate to the oils and fats industry, the remaining sectional headings being as follows: Section II, chemistry of the oils, fats and waxes; Section III, testing and analysis of oils, fats and waxes; Section IV, classification of oils, fats and waxes; Section V, production and refinement of oils, fats and waxes; Section VI, oleo-resins and essential oils. A special feature of this volume is the colored diagrams of the more important analytical determinations, while detailed descriptions of individual oils and fats are given wherever possible, the figures showing the average values, the normal variations, and the outside limits recorded for the various analytical data. Taken as a whole this volume places before the reader a vast amount of information which should prove of great value and service to those engaged in this most important branch of chemical industry.

THE CHEMICAL CONSTITUTION OF THE PROTEINS By R. H. Plimmer, D.Sc. University Reader in Physiological Chemistry, University College, London. In three parts. Part I, Analysis. 3rd edition. Royal 8 vo., 174 pages, cloth, $1.80. London and New York, Longmans, Green & Co.

Increased interest in the subject of physiological chemistry or biochemistry has prompted the author to place this branch of science in a more accessible position by issuing a series of monographs upon the various chapters of the subject, each independent of and yet dependent upon the others, so that from time to time, as new material and the demand therefor necessitate, a new edition of each monograph can be issued without re-issuing the whole series. Since the appearance of the last edition of Part I, a large amount of new material has come to hand, particularly with reference to the analysis of proteins, of which the author states we know of some forty or fifty natural ones occurring in both animals and plants. These are divided according to their origin, solubility, coagulability on heating and other physical characteristics into ten groups, the hydrolysis of the protein molecule being first discussed, followed by a discussion of the isolation and estimation of the units composing the molecule, the latter discussion being divided into two sections, viz: the mono-amino acids, and the di-amino acids. Then appears a summary of the results of the two analyses, with sections on the analysis of proteins by the distribution of the various kinds of nitrogen, analytical data and a very complete bibliography of the subject. Taken as a whole this book places before the reader practically all of the recently established facts in this interesting analytical field of physiological chemistry.

USEFUL DRUGS prepared under the direction and supervision of the Council of Pharmacy and Chemistry of the American Medical Association. 3rd edition, 12 mo., 173 pages, cloth, Chicago. Press of the American Medical Association.

This is a list of drugs selected to supply the demand and to serve as a basis for the teaching of materia medica and therapeutics, and for examination on these subjects by State licensing boards. To this end each drug is followed by a discussion of its action, uses and dosage, the aim being to make the student proficient in his knowledge of the pharmacology of a restricted list of typical drugs. By concentrating his effort to a study of such drugs, he is much more likely to be better posted on the subject than if he were to spread his studies over the entire materia medica. Inclusions in this edition of "Useful Drugs" are the names of theophylline and antimeningococcus serum, both of which in the opinion of the Council of Pharmacy and Chemistry are deemed of sufficient importance to be included. On the other hand dilute hydrocyanic acid and diacetylmorphine (heroin) hydrochloride have been dropped, the first because it has become practically obsolete as a remedial agent, and the second because it is said to possess no advantage over morphine, and also, "its introduction has been harmful, in that it furnished a specious means on the one hand of avoiding the well founded popular fears of morphine by substituting another habit-forming drug." The list of drugs selected represents practically all of the remedial agents the average physician will ever need in his practice.

TRAINING AND REWARDS OF THE PHYSICIAN. By R. C. Cabot, M. D., author of "What Men Live By." 12 mo., 153 pages, $1.25 net. Philadelphia. J. B. Lippincott Company.

The pharmacist whose line of work to a certain extent runs parallel to that of the physician, will really enjoy this volume in which the author describes the preparation of the physician, the factors making for success, and what rewards the young man may hope for if he chooses to adopt that profession. He believes that medicine "is a profession which can use the whole of a man as no other profession can. The physician is the child of his age. Such an opportunity as a great painter had in the Renaissance or a great musician had in the early years of the Nineteenth Century, a physician has today." Its rewards, as he sees them, "are beyond those of any other profession." The practice of medicine, taken as a whole, is not a lucrative pursuit, and it brings few to fame and renown, but it brings to those who practice it opportunities to utilize all human powers. Nothing human is foreign to the work of a doctor whether it be the highest or lowest in our nature, the best or worst, scientific or unscientific; all of the knowledge and acquirements of man "summon the physician to stand upon his feet and make his contribution before he dies."

The young man about to choose his life work or who has decided to become a physician, will read with interest this presentation of the inward reality of the doctor's life and work, for it will enable him to judge whether it is the profession he should adopt, and once decided upon, what steps he should take to adequately prepare for it. Doctors in the daily practice of their profession will also be able to get many hints and lessons suggested by the author, who has enjoyed a wide and successful professional life.

GAS CHEMISTS HANDBOOK, A. F. Kunberger, editor, 8 vol., 354 pages, cloth. Published by the American Gas Institute, New York City.

This volume contains the report of the committee on chemical tests written by C. C. Tutwiler for the 11th annual meeting of the American Gas Institute held in 1916. It covers not only the gas industry, but various collateral lines, like the coke oven and coal tar by-product industries, which as time goes on are becoming more closely connected with the gas industry. The demand for by-products accompanying gas manufacture has called for chemists having special knowledge of this field of work, and to this end this handbook has been published. Chapter I treats of raw materials, as coal, coke, gas oil and purification material; Chapter II, products of gas manufacture, as illuminating gas, ammonia, tar, cyanogen; Chapter III, impurities in gas; Chapter IV, tar products, as drip oil, benzol, naphtha, tar, tar oils, road tars, naphthalene salts, and Chapter V, miscellaneous information concerning construction materials, alloys, lubricating oils, etc. The publication of such a handbook under the direction of the American Gas Institute should be encouraged as it tends to create uniformity of practice among gas chemists who will find in this volume practically all of the recognized standard methods of analysis.

HANDBOOK OF CHEMISTRY and PHYSICS, a ready reference pocketbook of chemical and physical data. 6th edition. By Charles D. Hodgman, B.S., and Melville F. Coolbaugh, M.A. 12 mo., 478 pages, cloth, $2. Cleveland, O., The Chemical Rubber Co.

In this new edition the compilers have presented in a compact and easily portable volume a reference book for laboratory and classroom workers. The material has been intelligently selected, and covers a wide field of investigation, such as mathematical tables, logarithmic tables, numerical constants, qualitative analysis schemes, tables relating to the properties of matter, as density, elasticity, surface tension, viscosity, etc.; data relating to heat, hygrometric and barometric tables, sound, electricity and magnetism, light, miscellaneous tables, measures and units, wire tables, apparatus lists and a bibliography of textbooks, manuals and reference books in chemistry. One table which shows up well in this book is that relating to the physical constants of inorganic compounds, which the compilers inform us has been entirely rewritten, data now being given for about one thousand compounds, and extensive enough to meet the needs of the average laboratory worker. Pharmacists will find the book to contain much useful information relating to their field of work.

Germany is Listening—Make your Money Talk—Buy a Liberty Bond.

Use of German Patents in the United States

Acting under the provisions of the Trading with the Enemy Act, the Federal Trade Commission has granted a number of licenses to American firms to manufacture certain drugs, chemicals and dyestuffs by using enemy controlled patents. In the list of products for which licenses have been granted are three of the most important synthetics used by the medical profession. These are Barbital, Procaine and Arsphenamine, which have replaced Veronal, Novocaine and Salvarsan. Under the ruling of the Commission, each manufacturer may have his own trade name upon the label, but the official name must be the prominent one on all packages. The products of most importance to the drug trade, with the name of the licensed manufacturers, are given below:

Derivatives of oxyarylarsinic acids—Dermatological Laboratories, Philadelphia; Takamine Laboratory, Inc., New York City; Farbwerke-Hoechst Co., New York City; Diarsenol Co., Buffalo.

Alkali compounds of dioxy-diaminoarsenobenzene—Dermatological Research Laboratories, Philadelphia; Takamine Laboratory, Inc., New York City.

Preparation from alkali salts of the 3, 3-diamino-4, 4-dioxyarsenobenzene—Dermatological Research Laboratories, Philadelphia, Takamine Laboratory, Inc., New York City.

Derivatives of diaminodioxyarsenobenzene—Dermatological Laboratories, Philadelphia; Takamine Laboratory, Inc., New York City; Diarsenol Company, Inc., Buffalo, N. Y.

C-C-Dialkylbarbituric acid—Abbott Laboratories, Chicago, Ill.

Medicinal preparation—Takamine Laboratory, Inc., New York City; Diarsenol Co., Inc., Buffalo, N. Y.

Alkamine esters of paramino benzoic acid—Rector Chemical Co., Inc., New York City; Farbwerke-Hoechst Co., New York City; The Abbott Laboratories of Chicago; Calco Chemical Company, Bound Brook, N. J.

Medicinal preparation—Diarsenol Co., Inc., Buffalo, N. Y.

Dihydrochloride of diamino dioxyarsenobenzene—Diarsenol Co., Inc., Buffalo, N. Y.

Tooth paste and tooth powder—Lehn & Fink (exclusive).

A certain named chemical product—The Abbott Laboratories of Chicago.

Under American treaties with Germany patentees of such staples had nine months in which they could go on with their business before any steps could be taken by this Government to take over such patents for the welfare of the people of this country. The Trading With the Enemy Act dealt with the matter comprehensively, and the Federal Trade Commission proceeded to work out the complete conquest of the secret of making Salvarsan. The problem was so cunningly disguised in the descriptions set forth in the patents taken out in the United States that it took months to decipher them.

In the drug named the "mother substance" a yellow powder was itself patented. This powder must be mixed with a liquid which was also separately patented. Then there was a patent on the resulting product and the process by which the powder and the liquid were mixed. The yellow powder must not be exposed to oxygen or it will volatilize with the rapidity of an explosion. It is necessary, therefore, to contain it in a glass ampule with one atmosphere of hydrogen. This container is patented.

The remedy is introduced intravenously in the arm when it is converted to liquid. Even this method is patented. Besides all these interlocking patents issued to one or more persons, the practice had been to use a trademark and this has been taken out in the name of still another person not named in the patents.

The Federal Trade Board commissioned the chemical laboratory at Chicago University and the Dermatological Research Laboratory of Philadelphia to solve the chain of problems, and they have accomplished it successfully. The importance of this achievement may be appreciated when it is remembered that Great Britain, soon after going to war with Germany, undertook to get a supply of Salvarsan by licensing indiscriminately any of her manufacturing chemists who desired to produce the drug, with the result that more than 200 lives were lost from the use of improperly made imitations of it.

The drug is deadly when imperfectly produced or used, and this fact was not at first fully taken into account. The error was promptly corrected with a measure of success in the production of the remedy.

After establishing the production of the drug, the United States Government proceeded to license five different firms to make it, so that the supply is now sufficient to meet demands. These licenses are issued under strict terms set forth in the Trading With the Enemy Act. Licenses are under Government regulation as to price. Exorbitant charges are forbidden at the peril of a forfeiture of the licenses.

Manufacturers are required to turn over to the Public Health Service 2 per cent. of their product, nominally to protect the public in the purity and quality of the drug. Another object underlies this requirement. Since it became known that the Government would come to the rescue of those afflicted with the malady, for the cure of which the drug was devised, hundreds of persons have written appealing to the Federal Trade Commission to know where they could be supplied. It has now become the settled practice to refer such applicants to the Public Health Service.

When letters asking for drugs are turned over to the Public Health Service, local physicians of that service are at once notified and proceed to administer the cure to patients. The manufacture is at all times subject to the inspection of the chemists of the Public Health Service in order to assure a guarantee of quality. The licenses to manufacture Arsphenamine run for the life of the patents.

The largest current production of Arsphenamine is for the army and the navy. There is, however, a supply available to an important extent for the general public. The product is being made commercially, so that it can be supplied to hospitals at $1 a dose, the general price being $1.50. There will be no monopoly of the drug. Major Gen. Gorgas, the Surgeon General of the army, testified before a committee of Congress that 10,000 doses were acquired annually for the United States Army alone. Purely as a military need, it was necessary to obtain a supply for this country at almost any hazard. An exporting license for the supply required in Canada has been issued, and shipments are being made to that country.

Under the law the German owners are guaranteed a royalty of 5 per cent. and the American licensees are required to give a bond to cover a fund sufficient to pay these royalties. Thus there is no violation of the law or the equities in taking over the drug.

New Types of Adulteration

Since the Food and Drugs Act became effective, it has been recommended from time to time by importers that the Bureau of Chemistry issue announcements of the action taken on detained shipments of foods and drugs in a manner similar to those now issued as notices of judgment concerning the outcome of prosecutions under the domestic sections of the law. Following a hearing held at the Bureau in Washington last March to discuss this matter and to afford importers an opportunity of expressing their views on the subject, it developed that the information, to be of value, should be specific and descriptive and that the issuance of such information could not be effected without identifying either directly or by implication the importers concerned. The Bureau, however, decided to continue to publish for the information of the trade and public generally, items regarding new types of adulterations encountered and means of detecting such adulterations, the following announcements relating to crude drugs:

Cantharides Substitute (Chinese Blister Flies)

Examination of samples of importations of "cantharides" (Spanish Flies), *Cantharis vesicatoria*, has disclosed that so-called Chinese blister flies, belonging to a species of *Mylabris*, have been substituted in some instances for the true material. The wing covers of *Mylabris* species have alternating black and yellow bands or stripes, whereas those of *Cantharis vesicatoria* are bronze green. Material obtained from *Mylabris* species should not be labeled or sold as and for cantharides.

Cinchona Barks (Official and Non-Official)

The department has found cinchona barks offered for entry under names recognized in the United States Pharmacopoeia but deficient in alkaloids. Such products will be detained and required to be re-labeled in accordance with the requirements of the Food and Drugs Act as explained in item 180, S. R. A. Chem. 18, p. 43. No objection will be offered to the importation, if properly labeled, of products from cinchona species other than those recognized in the United States Pharmacopoeia, for use in the preparation of alkaloids or under conditions which preclude their use in any of the pharmaceutical preparations official in the Pharmacopoeia. The department will, however, recommend the exclusion from the United States of "cinchona" found to be practically devoid of cinchona alkaloids.

Couchgrass (Doggrass) Adulterant (Bermuda Grass)

Examination of samples of importations of "couchgrass," *Agropyron repens* (L.) Beauvois, has disclosed that "Bermuda grass," *Cynodon dactylon* L., has been substituted in some instances for the true material. The lack of starch and the considerable size of the endodermis cells characterize the rootstock of *Agropyron repens*, while the rootstock obtained from *Cynodon dactylon* contains considerable starch and smaller endodermis cells. Furthermore, the scales of the rootstocks of *Cynodon dactylon*, which are often, or usually, pubescent, are thinner and larger than those of *Agropyron repens*. The department will recommend the exclusion from the United States of any shipment labeled "couchgrass" consisting wholly or in part of "Bermuda grass."

Dandelion Root Adulterant (Lactuca Species)

Examination of samples of importations of "dandelion root," *Taraxacum officinale* Weber, has disclosed that in some instances, roots obtained from a *Lactuca* species, very probably *Lactuca canadensis* L., or *Lactuca spicata* (Lam.) Hitchc., have been substituted for the true material. The root of *Taraxacum officinale* may be distinguished by the concentrically arranged groups of laticiferous vessels and sieve tubes, which alternate with whitish inulin-bearing parenchyma. *Lactuca* root is characterized by its tracheæ which are arranged in radial rows, usually one cell wide, alternating with medullary rays two or three cells wide. The department will recommend the exclusion from the United States of any shipment labeled "dandelion root," consisting wholly or in part of roots of *Lactuca* species.

Fennel Adulterant (Bitter Fennel)

Examination of samples of importations of "fennel seed" *Foeniculum vulgare* Miller, has disclosed that bitter fennel, *Foeniculum piperitum* Sweet, has been substituted in some instances for the true material. This species is not cultivated and may be distinguished from *Foeniculum vulgare* by its very much smaller size and the decidedly bitter taste and flavor of its volatile oil. The department will recommend the exclusion from the United States of any shipment labeled "fennel seed," consisting wholly or in part of bitter fennel.

Juniper Berries (Containing Discolored or Withered Berries)

Examination of shipments of juniper berries, *Juniperis communis* L., offered for import has disclosed that in many instances a considerable number of the berries were discolored and withered. The department will recommend the detention of juniper berries found to contain more than 10 per cent. of immature, discolored and withered berries, or foreign material.

Phosphate Beverages

Examination of certain products sold or labeled as phosphate beverages shows the presence of little or no phosphoric acid or acid phosphate. A product sold or labeled as a phosphate beverage which does not contain an appreciable amount of phosphoric acid or acid phosphate will be regarded by the department as in violation of the Food and Drugs Act. This is not intended to exclude, in products of the above character, the use of other acid material commonly used in the preparation of beverages, provided such addition does not result in the introduction of any poisonous or deleterious ingredient.

Orgeat or "Orzata" Sirup

The bureau is of the opinion that an article which is prepared essentially from sugar (sucrose) sirup and milk of almonds is alone entitled to be termed orgeat or "Orzata" sirup without qualification. The sale as orgeat or "Orzata" sirup of articles which are flavored with oil of bitter almonds and in the preparation of which gum benzoin or a similar substance has been substituted for milk of almonds, thereby producing the turbidity characteristic of milk of almonds, is, in the opinion of the bureau, a violation of the Food and Drugs Act. Such products should be designated as imitation orgeat or "Orzata" sirup.

Liqueurs

There are certain types of liqueurs such as "Anesone," "Doppelt-Kuemmel," "Allasch," which are characterized by an unusually high alcoholic proof and an unusually high content of essential oils. Liqueurs that are branded with names belonging to representatives of these types should possess the strength of essential oil and the alcoholic proof which are characteristic of their respective types. Liqueurs of a lesser strength of essential oil or lower alcoholic proof, labeled in a manner characteristic of the above types of liqueur, would be regarded as in violation of the Food and Drugs Act.

Weight of Olive Oil

A determination of the specific gravity of over 500 samples of imported olive oil indicates that the weight of a standard United States gallon of olive oil at 68° F. (20° C.) varies between 7.564 pounds and 7.649 pounds, the average being 7.61 pounds, and that for all commercial purposes the average value of 7.61 pounds may be taken as the weight of a gallon of olive oil at 68° F. (20° C.).

DRUG TRADE ROLL OF HONOR

To honor the men of Pharmacy serving in the war against Autocracy the ERA wants to publish a complete roster. Send full particulars to 3 Park Place, New York.

The Massachusetts College of Pharmacy contributes the following list of names of graduates and students now in the service;

WILLIAM B. SHAW, '84, U. S. N., retired, assigned to active service at Charleston, S. C., Navy Yard.

FREDERICK W. BRECK, '87, U. S. N., retired, assigned to active service at Norfolk Navy Yard.

FRANK PIPER, M. D., '89, 1st Lieutenant, U. S. Medical Corps, France.

JOHN T. MURPHY, '00, U. S. Army, France.

ROBERT C. PETERSON, '10, U. S. Base Haspital No. 6, France.

ROBERT P. McKEOUGH, '10, in service at Camp Devens, Ayer, Mass.

CHARLES A. CRONIN, '12, U. S. Aviation School, Massachusetts Institute of Technology.

ROY C. CHARRON, '13, Hospital Corps, Camp Devens.

FRANCIS H. CLOUDMAN, '13, sergeant 1st class, U. S. Army Base Hospital No. 6, France.

NORMAN S. COOK, '13, "somewhere in France."

FRANK R. McKENNEY, '13, Sergeant, U. S. Arsenal, Watertown.

T. C. ARMSTRONG, '14, U. S. Marine Hospital, Vineyard Haven.

WILLIAM W. GIFFORD, '14, enlisted and stationed at Allentown, Pa

CHARLES P. NORTON ,'14, sergeant, Medical Corps, Aviation Concentration Camp, Garden City, N. Y.

EARL F. SMITH, '14, Camp Devens, Ayer, Mass

JOHN DORENBAUM, '15, Hospital Corps, U. S. Navy, Newport, R. I.

ELMER S. JOHNSON, '15, Camp Devens, Ayer, Mass.

J. WESTON PRATT, '15. U. S. Base Hospital No. 2, France.

HARRIS W. ALEXANDER, '16, Ambulance Corps, France.

ALFRED H. CATOZZI, '16, 1st Lieutenant, U. S. Infantry, France.

BAGDASAR B. GOOLKASIAN, '16, corporal, Regular Sanitary Detachment, 312th Infantry, Camp Dix, N. J.

ELPHEGE J. LEDOUX, '16, corporal, U. S. A. Ambulance Corps, Camp Devens.

RENE J. MIVILLE, '16, Medical Reserve Corps, Ontario, N. Y.

EMILE J OUELLET, '16, Medical Corps, Fort Ethan Allen.

ALBERT A. ROSEN, '16, Medical Corps, Fort Ethan Allen.

DUANE G. ALDRICH, '17, Sergeant, U. S. Base Hospital, France.

CECIL L. HOLDEN, '17, dispensing pharmacist, U. S. Base Hospital, France.

ALFRED F. TINKHAM, '17, Medical Corps, 39th Infantry, Syracuse, N. Y.

VARNUM J. ABBOTT, student, Portsmouth Navy Yard.

ANATOLE J. DEMERS, student, U. S. Base Hospital No. 39.

FRED M. DRAKE, student, Navy Medical Service, Portsmouth, N. H.

WILFRED A. ELLIS, student, Base Hospital, France.

ARNOLD H. EPSTEIN, student, Navy Medical Service, Marine Hospital, Chelsea.

FRANK J. FREISTADTER, student, in training, Fort Ethan Allen.

EUGENE FENTON, student, U. S. Field Hospital No. 1, France.

GEORGE L. GAINLEY, student, Fort Ethan Allen.

HYMAN GERSON, student, Medical Department, Regular Army.

CARL C. GARY, student, training at Camp Upton, N. Y.

WALTER R. HILLBERG, student, Naval Course in Aviation, Mass. Institute of Tech.

MICHAEL J. KEARNEY, student, U. S. Base Hospital, No. 39.

HAROLD KNIGHT, U. S. A. Headquarters Ambulance Co., France.

JOSEPH T. MORGAN, student, has enlisted.

HAROLD D. MOORE, student, in service at Camp Devens.

RAYMOND MULVENY, U. S. Base Hospital No. 7.

HAROLD R. MUNRO, student, corporal, chief clerk, Medical Supply Depot, Camp Gordon, Atlanta, Ga .

WORDEN SANFORD, student, U. S. Marine Hospital, Chelsea.

HAROLD W. STIVERS, student, in service at Chelsea.

ROY A. SUNTER, student, has enlisted.

CORNELIUS TAFT, student, with troops from New England in France.

PAUL K. WILSON, student, U. S. Field Hospital, No. 1, France.

The New York College of Pharmacy reports the following additions to the "Honor Roll" received during the past month;

M. V. HAWKINS, '17, Hospital Camp U. S. N. 52nd st. station, Bay Ridge, N Y.

J. B. KAUFMAN, '15, post hospital, Fort Jay, Governor's Island, N. Y.

C. TARALLO, '17, U. S. N.

A. T. COCCOLA, '18, Radio Barracks, Harvard University, Cambridge, Mass.

L. D. SHORT, '13, Base Hospital No. 1, 62nd st. and Columbus ave, New York City.

A. F. KUHLMANN, '10, U. S. N. Medical corps, New London, Conn.

GEO. ALLITON, '11, Base Hospital No. 8, American Expeditionary Force, France.

A W. FINNEGAN, '18, Naval Reserve.

F. V. DAMTOFT, '18, Naval Reserve.

FRANK J. BRANNIGAN, '13, U. S. Army, Ala.

A. B. DOUGHERTY '19, U. S. Battleship Missouri.

Four members of the faculty of the School of Pharmacy, Medical College of Virginia have received commissions and are now in service;

PROF. ALBERT BOLENBAUGH, chairman of the School, 1st Lieutenant, Sanitary corps (Gas Defence Service), Camp Lewis, Wash.

PROF. AUBREY STRAUS, Department of Bacteriology, lieutenant, Sanitary Corps, Base Hospital, France.

LELAND MILLER, lecturer on commercial law, commissioned officer, Fort Sam Houston, San Antonio, Tex.

DR. FRED P. FLETCHER, Jr., lecturer on physiology and first aid, 1st Lieutenant, Medical Reserve Corps, training in school of Roentgenology, Richmond.

EARL M. COLE, Ph.C., Medico Chi, '15, Red Cross Pharmacy, East Stroudsburg, Pa.; pharmacist, U. S. Army, Fort DuPont, Delaware.

The Philadelphia College of Pharmacy contributes the following list of members of its faculty, student body and alumni who have joined the military service:

JOHN A. RODDY, Jr., Captain M. O. R. C., 303 Engineers, Camp Dix, military branch, Trenton, N. J.

A. HASTINGS FITZKEE, '16, Wing No. 1, Squadron No. 28, Camp Hicks, Fort Worth, Texas.

RUDOLPH W. ADLER, '17, 15th U. S. Engineers Railway, American Expeditionary Force, France.

DAVID F. AKE, Troop G, 20th cavalry, Fort Riley, Kansas.

CHAS. E. ALEXANDER, '96, assistant surgeon, U. S. N., Bureau of Medicine and Surgery, Washington.

RUDOLPH E. ALFF, '16.

HARRY BANZHOF, '17, Hospital corps, 109th Infantry, Augusta, Ga.

GEO. J. BAUSHER, Ambulance Co. No. 2, Ft. Oglethorpe, Ga.

HOWARD L. BILL, Naval Base Hospital No. 2, League Island, Philadelphia.

HAROLD L. BLANCHER, Presbyterian Hosp. Mobile Unit A, Fort Porter, Buffalo, N. Y.

DR. ZERA E. BOLIN, Lieutenant, Field Hospital No. 2.

JOSEPH T. BONGARTZ, '12, 308th Infantry, Camp Upton, L. I.

ALBERT S. BRENNEMAN, '12, 328th Field Hospital, Camp Gordon, Atlanta.

GEORGE H. BRENNER, cadet, aviation section, Signal Corps, American Expeditionary Force, France.

WM. P. BRISGOL, '13, 19th Regiment Engineers, American Expeditionary Force, France.

B. GERALD BROWN, '17, Hospital corps, N. Y. State Naval Militia, Naval Training Station, Pelham Bay, N. Y.

LELAND N. BROWN, '17, Field Hospital No 33 M. O. T. C., Ft. Oglethorpe, Ga.

HARRY H. BUCH, '18, 2nd Regiment Armory, Philadelphia, Pa.

LUTHER A BUEHLER, Medical Reserve, University Base Hospital No. 20.

ROBERT J. BURTON, Jr., '18, 2nd Regiment Armory, Philadelphia, Pa.

FRANK CAMPBELL, '96, 314th Infantry, Infirmary E 11, Camp Meade, Md.

THOMAS P. CAMPBELL, '95, Base Hospital No. 34, Camp Pierson, Allentown, Pa.

HARRY A. COHEN, '15.

ARTHUR B. COLDREN, '08, Hospital Corps, Wissahickon Barracks, Cape May, N. J.

CHAUNCEY P. COLESTOCK, '17, 316th Infantry, Infirmary, Camp Meade, Mo.

ALBERT D. COOLEY, '16, Hospital Corps, Wissahickon Barracks, Cape May, N. J.

JAMES G. COTANCHE, '17, Sergeant, 25th Ambulance Corps, Camp Meade, Md.

FRANK A. CRIBBS, '17, pharmaceutical base hospital, Camp McClellan, Anniston, Ala.

ADAM CROFF, '17, 356th Infantry Supply Co., Camp Funston, Junction City, Kansas.

GEORGE C. DERICK.

BASIL M. DIXON, Lieutenant, Co. L, 318th Infantry, Camp Lee, Petersburg, Va.

HAROLD B. DOHNER, '17, 101st Cavalry, Troop A, Camp Hancock, Ga.

LEONARD F. DUDLEY, '17, Base Hospital, Camp McClellan, Anniston, Ala.

NUMA DOVOISIN, Panama.

LOUIS H. EATON, '15.

CHARLES E. Enberg, '12, Medical Department, Training Camp A, Fort Ethan Allen, Vt.

WEBSTER D. ENGLISH, 11th Infantry, Medical Department, Chattanooga, Tenn.

ROBERT FARRELL, '17, Wardmaster, Base Hospital, Camp Meade, Md.

ORRIE R. FLEMING, '19, Ambulance Co., No. 6, Fort Benjamin Harrison, Ind.

W. CLIFFORD FORBES, '17, 167th Infantry, M.C., Camp Mills, L. I.

HARVEY FRANK, recruit, camp, N. O. T. C., 9th Co., Ft. Oglethorpe, Ga.

CHARLES K. FRICK, '17, Ambulance Co. No. 30, Camp Logan, Texas.

HARRY G. FUHR, '17, Hospital Corps, Wissahickon Barracks, Cape May, N. J.

CARL B. FURNELL, '94, Assistant Surgeon, U. S. N., Bureau of Medicine and Surgery, Wilton, Me.

JOSEPH C. GERSHEN, '17, Hospital Corps, 110th Infantry, Camp Hancock, Ga.

C. THURSTON GILBERT, '13, Sergeant, Medical Supplies, Base Hospital Unit No. 43, Ft. McPherson, Ga.

JAMES P. GLOVER, '15, Naval Reserve, Hospital Corps, Naval Medical School, Washington, D. C.

RAYMOND GREEN, '16, 312th Field Artillery Band, Camp Meade, Md.

ALPHONSE P. GROBLEWSKI, U. S. A. A. S., section No. 604, Allentown, Pa.

WILLIAM S. GROF, Co. I, 316th Infantry, Camp Meade, Md.

DAVID GROSS, Medical Supply Depot, Camp Meade, Md.

GEORGE R. GROSS, '17, Presbyterian Hosp. Mobile Unit A, Ft. Porter, N. Y.

BROOKS C. HAINES, '09, Medical Corps.

ALBIN A. HAYMAN, 28th Training Battalion, Depot Brigade, Camp Meade, Md.

GEORGE L. HEIGES, '16, H. A. I. Naval Base Hospital, No. 5, American Expeditionary Force, France.

ROY S. HEISER, Fort Slocum, N. Y.

LAWRENCE HELWEG, '16, U. S. School of Military Aeronautics, Brown Hall, Princeton, N. J.

NORMAN B. HERTZLER, '17, Jefferson Hospital Unit No. 38, 2nd Regiment Armory, Philadelphia, Pa.

CLAUDE T. HESS, '17, Base Hospital, Camp McClellan, Annistton, Ala.

ARNOLD H. HUBER, '15, Field Hosp. Div., Camp Meade, Md.

HARRY G. HUTH, '17, Sergeant, 109th infantry, Hospital Corps, Camp Hancock, Augusta, Ga.

FRED E. IBBERSON, '17, Coast Artillery.

CLIFFORD F. JACKSON, '17, Marine Barravks, League Island, Philadelphia, Pa.

HARRY H. JOHNSON, Base Hospital, Camp McClellan, Anniston, Ala.

HERBERT L. JONES, '17, U. of Pa., Base Hospital Unit.

AMOS W. KAPLER, '17, Marine Barracks, League Island, Philadelphia.

JOHN W. KARN, '17, Base Hospital, Camp McClellan, Anniston, Ala.

PAUL KIND, '14, 311th Infantry, Camp Dix, Wrightstown, N. J.

ADAM KINDT.

FRANK M. KING, '15, Yard Dispensary, Navy Yard, Philadelphia, Pa.

LYNN T. KISHBAUGH, Medical Department, 109th Infantry, Camp Hancock, Augusta, Ga.

WM. S. KOLLER, '15, Infirmary E 11, 314th Infantry, Camp Meade, Md.

JOHN R. KURTZ, '16, Sergeant, Infantry, Camp Meade, Md.

PHILIP J. LECKLIKNER, U. S. Naval Base Hospital No. 5, American Expeditionary Force, France.

GORDON LEECH, U. S. Naval Hospital, No. 10, American Expeditionary Force, France.

IRWIN E. LEHR, '16.

ALBERT LERNER, '16, Hospital Corps, 314th Infantry, Camp Meade, Md.

PERCEL LITTLE, 5th Company, Wissahickon Barracks, Cape May, N. J.

HARLAND A. McCARTY, '13, Training Camp Dispensary, League Island, Philadelphia.

JOHN F. McGINNIS, '16, Sergeant, Ambulance Corps No. 28, 28th Division, Camp Hancock, Augusta, Ga.

LESTER M. McWILLIAMS, Jefferson Hospital Unit, No. 28, 2nd Regiment Armory, Philadelpbia, Pa.

JAS. H. MAGOWAN, Lieutenant, Camp Kelly, San Antonio, Texas.

MATTHEW C. MEAGHER, '17, Hospital Corps, Columbus Barracks, Ohio.

WESTON MORRELL, Quartermaster's Corps, Camp McClellan, Anniston, Ala.

GEO. T. MORRIS, '13, U. S. S. Newport News.

IRWIN MOYER, Co. I, Pa. N. G. Machine Gun Co., L. I.

WM. V. MOYER, '13, U. S. A. T. Malorey, Medical Department, Hoboken, N. J.

H. KENDALL MULFORD, Jr., '17, care Morgan, Harjes & Co. bankers, Paris, France.

BASIL J. F. MOTT, '15.

PHILIP E. NAGLE, '17, Infirmary, 316th Infantry, Camp Meade, Md.

G. WELLINGTON NEIFFER, '17, Base Hospital, No. 34, U. S. A., American Expeditionary Force, France.

WM. E. NELSON, '15 Hospital Corps, 111th Infantry, Camp Hancock, Ga.

MORRIS NOVECK, Battery E, 312th Field Artillery, Camp Meade, Md.

HARRY W. NULL, '17, Co. K, 109th Infantry, Camp Hancock, Augusta, Ga.

DONALD M. PATTERSON, Medical Department, 10th Engineers, Camp McClellan, Anniston, Ala.

C. ADRIAN PENNOCK, '15, Co. E, 304th Ambulance Tr., Camp Meade, Md.

WM. E. PERSING, '17, Gas Defense Service, 12th and Race sts., Philadelphia.

W. J. PETERSON, '12, Pharmacist, Pearl Harbor Hospital.

LYNWOOD C. PINE, '17, Naval Dispensary, Navy Yard, Washington, D. C.

JOHN W. PORR, '16, Hospital Corps, 112th Infantry, Camp Hancock, Ga.

CHESTER J. POWELL, '15, Machine Gun Co., 315th Infantry, Camp Meade, Md.

HARRY W. PRESS, '10, Pharm. Mate, Hospital Corps, Wissahickon Barracks, Cape May, N. J.

EVERITT J. ROBERTS, 5th Co. Wissahickon Barracks, Cape May, N. J.

D. ELVIN ROSENBERGER, '16, Medical Department, Ft. Oglethorpe, Ga.

BLAIR G. RUMSEY, '12, Co. 9, 109th Infantry, Camp Hancock, Augusta, Ga.

OSCAR G. RUGE, '93, Assistant Surgeon, U. S. N. Bureau of Medicine and Surgery, Washington, D. C.

SYLVESTER RUSCH, '12, Sergeant, Hospital Corps, 112th Infantry, Camp Hancock, Augusta, Ga.

MELVIN W. SAYLOR, '15, Dispensary, U. S. Marine Hospital, Philadelphia.

FRANK W. SCHELL, '11, Post Hospital, Chanute Field, Rantoul, Ill.

L. O. SCHETKY, '91, Assistant Surgeon.

JOHN F. SHAAK, '17, Ambulance Co. No. 3, Camp McClella,n Anniston, Ala.

CHARLES E. SHAEFFER, Ambulance Co. No. 3, Fort Bliss, El Paso, Texas.

ELIAS SHAKER, '11, Medical Dept., 308th Infantry, Camp Upton, N. Y.

Over the Top with your Dollars—Buy Liberty Bonds.
Time Fights for Germany—Buy Bonds Now.

Schools and Colleges

FAIRCHILD SCHOLARSHIP EXAMINATION

The following announcement has been sent to the Conference Schools relative to the Fairchild Scholarship:

The Fairchild Scholarship this year will be awarded to a graduate pharmacist of one of the Conference Schools and the examinations will be held June 25th. Kindly make the announcement to your classes so that those who desire can compete for the Scholarship. The examination questions will be sent on order of the dean of your school under seal.

UNIVERSITY OF MICHIGAN

Funds are now being collected by the Detroit committee for the Schlotterbeck memorial picture to be presented to the University at the 75th anniversary in June. Mr. J W. T. Knox, of Nelson-Baker Co., is chairman of this committee.

Preparation has actively been started for the development of a fine medicinal garden. Professor Kraemer is personally superintending much of the work.

Sixty-four students enrolled for the second semester in this College, as compared with seventy-five for the first semester. Already two of these have withdrawn for military service. These were John Naylor, who was detailed for gas defense service, and E. L. Hammond, who was detailed for aeroplane photography. There are now between five and six thousand students and alumni of the University of Michigan engaged in the war.

FORDHAM UNIVERSITY

Fordham University College of Pharmacy held its annual banquet at the Ellsmere, March 7th, at which every member of the Faculty, alumni and of both senior and junior classes were present. The tables were handsomely decorated, the College colors of Maroon and White were to be seen everywhere. The menu consisted of everything one's heart could desire. This menu in itself was a unique souvenir and was the talk of the evening. It was written by Bruno Kanders Kuhe, 1918, who is known throughout the college for his numerous accomplishments in the various entertainments, that were held by the college. Another surprise was the presentation of a miniature glass-mortar with the inscription of "Fordham 1918" to everyone present. At the conclusion of the dinner, Mr. Otto Canis, acting as toastmaster, announced Morris Kaidin as the speaker of the Junior class. In his speech, touching upon the subject of the Edmonds bill Mr. Kaidin proved to be a second Daniel Webster. Following him Irving Edelstein, representing the Senior class spoke of the true Fordham spirit, which prevails throughout the entire college. For the Alumni, E. Hurwitz and Dr. Leo Ganbarg, who is one of the first graduates of this college took the floor. Mr. Hurwitz in his address touched upon the subject of better pharmacy, whereas Dr. Ganbarg spoke about the establishment of an emergency fund by the Alumni Association, the purpose of which is to help students financially. This plan was heartily sanctioned by all. At the conclusion of their addresses, Mr. Hurwitz presented Dr. Jacob Diner an umbrella. Dr. Ganbarg presented a beautiful loving cup to Dr. Gustave Horstmann, the father and founder of the Alumni Association, as a token of appreciation for his work.

Charles Siegel, representing the Senior Class made the following presentations: a gold watch to Professors Diner and Horstmann and a silver cigarette case to Professors Hohmann and Eichler. Appropriate presents were also made to Father Avry, Father Daniel Sullivan and Mr. Canis. by Mr. Malloy of Class 1919.

After the presentations Professors Diner, Horstmann, Hohmann, Eichler, Avry, Sullivan, Ryan and Harold spoke. The general theme of the speakers was Fordham spirit. It was especially brought out, that character is the prevailing element of a professional man's career. A simile was brought out when Father Avry was summing up his speech, that "Men are like tea" that is, that a man must be in hot water, before his finer principles, his better self are brought out just as the drug when it is infused.

The school greatly appreciated the work of the committee, especially the Senior division, Mr. Edelstein, Mr. Kanders Kuhe, Mr. Fainland, Mr. O'Kane and Mr. Pedroni.

UNIVERSITY OF OKLAHOMA

Frank Madden of the Senior Class has left for Camp Travis where he will enter the service of our country in the New National Army. He is planning to ask for a transfer to the hospital corps as soon as possible.

Fred A. Jackson, Ph. G. '17, writes from U. S. Naval Training Station, Naval Operating Base, Hampton Roads, Va., that he is working in the drug dispensary at that place, having been recently transferred from Great Lakes Training Station, Illinois.

Earl G. Johnson, Ph. C., B. S., '17, writes from Ft. Rosecrans, Cal., that he is now quarantined on account of mumps and expects to be transferred into the chemical branch of the service as soon as he is out of quarantine. At present he is with the coast artillery.

Dr. Roy T. House, has received notice of his appointment to the faculty of the University of Chicago, to teach French during the summer session. Professor House is now teaching French at Fort Sill, but his plan is to return to the university and resume his work here after six weeks time.

L. C. Lichty, formerly assistant professor of mechanical engineering in the university, is second lieutenant in the aviation section of the signal reserve corps. He is assigned to the engineer officers' school at San Antonio, Texas, where he has been instructor in gas engines since he entered the service before Thanksgiving.

At a result from a request of Dean Howard S. Browne, Hubert Strahan who was drafted as a carpenter will be transferred to the Ordnance Corps. In a letter from W. H. Burnham, Captain of the Ordnance Department, Dean Browne is advised that the Ordnance is in great need of chemists.

A pharmaceutical seminar was started in the university in room 203 Science Hall. The various departments of this work were limited to ten minutes in the time that they were allowed in the discussion. The faculty members who led the different divisions of the discussions were:

General Chemistry,—Miss Briegel, Miss Johnson; Botany—Dean VanVleet, Mr. Jeffs; Organic and Physical Chemistry—Dr. Guy Williams, Prof. Badgett; Toxicology and Commercial Chemistry—Dr. Edwin DeBarr; Bacteriology—Dr. Ellison; Materia Medica—Dean H. S. Browne; Pharmacy—Lee Hull, D. B. Johnson.

A special war emergency course to prepare men for work in the hospital corps of the army or navy has been instituted. Though the course is intended primarily for pharmacy students, other students are invited to take the work which will consist of lectures and quizzes. The lectures will be given as follows: Anatomy and Physiology by Dr. L. B. Nice; First Aid and Emergency Surgery and Bandaging, by Dr. R. M. Hargrove; Nursing, Hygiene and Sanitation, by Dr. Gayfree Ellison; Pharmacy, by Prof. D. B. Johnson; Materia Medica, by Dean H. S. Browne; Chemistry, by Dr. Guy Y. Williams; Toxicology, by Dr. Edwin DeBarr. No credit will be given in the university for the work in this class which meets two hours each week. The hours for recitation are not yet arranged. Further information regarding the course may be obtained from Dean Browne.

OBITUARY

DR. A. B. HUESTED

Dr. Alfred B. Huested, Civil War veteran and well known Albany, N. Y., druggist, died on Feb. 23 at his home in Delmar. He was born in Clifton Park, N. Y., in 1840, and entered the drug business as a clerk for the Dexter & Nelliger Drug Co., Albany, when he was 16 years of age. In 1859 he began the study of medicine, and in 1862 he volunteered for United States Hospital service as a hospital steward. In the winter of 1863-4, on 20 days leave of absence, he went to Albany and passed his medical college and state board examinations and later was commissioned 1st lieutenant and assistant surgeon in the 21st N. Y. Cavalry, a position he held until 1866. At the close of the war, he went with his regiment across the plains on horseback, to protect the overland stage route from the Indians. On his return to Albany he gave up the practice of medicine and opened a drug store at Hudson and Eagle streets, moving to State and Eagle streets in 1886, when he established the firm of A. B. Huested & Co., from which he retired several years ago.

Dr. Huested joined the A. Ph. A. in 1879, and was a frequent attendant at its annual meetings. He was also a charter member of the New York State Ph. A. and served as its president for two years. He occupied the chair of materia medica and botany in the Albany College of Pharmavy from 1883 to November last, when his health forced him to discontinue. He was appointed a member of the first State Board of Pharmacy by Governor Cleveland in 1884, of which he was made president and held the chair for sixteen years. He was still serving as a member of the board at the time of his death. He was a member of the Masonic order, the Loyal Legion, and the G. A. R. He is survived by his widow, three sons, and three grandsons.

DR. ARTHUR H. ELLIOTT

Dr. Arthur H. Elliott, professor emeritus of chemistry, New York College of Pharmacy, and chief of the chemical department of the Consolidated Gas Company, New York City, died recently of Bright's disease in the Peekskill Hospital, Peekskill, N. Y. He was 68 years of age. He was born in London, England, was educated there, and after graduation from the British School of Mines in 1879 came to the United States. He completed his chemical training at Columbia University in 1881, specializing in gases, which brought him his position later with the Consolidated Gas Company. He was a member of the Engineers' Club, the University Club, the Chemists' Club and other organizations. He lived at Flushing, L. I. He is survived by his widow and three daughters.

Boards of Pharmacy

NEW JERSEY

The Board of Pharmacy has announced the licensing of 25 successful candidates at recent examinations for registered pharmacists, and 10 assistant pharmacists.

Among the registered pharmacists are: Harold C. Matthews, Hopewell; Constantine Pankevich, Trenton; Rudolph H. Querig, Trenton; Charles Ring, Philadelphia; Thomas J. Scarff, Trenton; Michael Schwartz, Lakewood, and Harry U. Vandegrift, Coatesville, Pa. C. R. Koeble, of Burlington, is a registered assistant.

SOUTH DAKOTA

Twenty-five applicants, representing pharmacy schools of four states were examined by the Board at the January meeting. The winners of certificates in the order given are John Roos of Tulare, Bliss Wilson of Frankfort, Albert Bittner of Chelsea, Carl Rottluff of Sioux Falls, Archie Trumm of Hayti, William Overturf of Doland, Anton Sletten of Canton and Arthur Nielson of Rapid City.

KANSAS

At the fourth quarterly meeting held in Wichita, February 13 and 14, there were thirty-four applicants for examination. Of this number eleven were successful and received certificates as Registered Pharmacists:

H. S. Bryant, Wichita, Kansas; George Bildstone, Ottawa, Kansas; I. R. Curry, Hiawatha, Kansas; S. W. Gibson, Wakeeney, Kansas; Hobart Harper, La Crosse, Kansas; C. V. Millikan, Stillwater, Okla.; Wm. C. O'Neil, Beloit, Kansas; Albert O'Toole, Wakeeney, Kansas; Charles B. Riegle, Hillsboro, Kansas; Wm. R. Weeks, Hutchinson, Kansas; H. L. Woodburn, Hoisington, Kansas.

ILLINOIS

At the examination for registered pharmacist and assistant pharmacists held in Springfield, January 29 and 30 by the Committee of Pharmacy Examiners under the jurisdiction of the Department of Registration and Education, the following successfully passed:

Registered Pharmacists: Irwin I. Bloom, Chicago; E. C. Cahill, Flat Rock; Ralph A. Emons, Marissa; LeRoy F. Gall, Chicago; Clifford Holler, Jacksonville; Sister Lillian Hurth, Springfield; Nathan Isaacson, Chicago; David I.

Assistant Pharmacists: Bert Brown, Aurora; Carl A. Friedley, Chicago; John C. Leady, Alton; David Maslowsky, Chicago; Frank A. Millburg, Jacksonville; Enrico F. Rocco, Chicago; Louis F. Stuebe, Jr., Danville.

Local Registered Pharmacist: A. J. Masse, Manteno.

Bert Brown, Aurora; Carl A. Friedley, Chicago; John C. Leady, Alton; David Maslowsky, Chicago; Frank A. Millburg, Jacksonville; Enrico F. Rocco, Chicago; Louis F. Stuebe, Jr., Danville.

LOCAL REGISTERED PHARMACIST

A. J. Masse, Manteno.

The next meeting of the Committee of Pharmacy Examiners for the examination of applicants for Registered Pharmacist will be held in Chicago in Room 547 County Building, April 9 at 9 o'clock in the morning. The next meeting of the Committee of Pharmacy Examiners for the examination of applicants for Assistant Pharmacist will be held in Chicago, April 11, at 9 o'clock in the morning in Room 547 County Building.

Professional & Trade Associations

NEW YORK BRANCH

(*Special to* The Pharmaceutical Era)

A new constitution and by-laws were unanimously adopted at the recent regular monthly meeting of the New York Branch of the American Pharmaceutical Association, held at the New York College of Pharmacy. Sections 1 and 2 of the new draft provide for officers and committees, respectively. Section 3, providing for the holding of meetings as at present, also requires that special meetings only be held upon the written request of five members in good standing, and then only after five days' notice. If the regular meeting would occur upon a holiday, it will be held upon the following Monday night. Ten active members will constitute a quorum at all meetings. Members in arrears of dues at the end of two calendar years will be dropped from the rolls. The treasurer will deposit branch funds in a bank to be designated by the executive committee.

Regular meetings will consist of two sessions, one for business, the other scientific. The business session will begin at 8:15 o'clock and last, unless properly extended until 9. It will consist of the reading of the minutes, reports of all committees, except that upon the progress of pharmacy; reports of officers, unfinished business, new business, and the election and installation of officers. The scientific session will include the report upon the progress of pharmacy, the reading of papers, the presentation of which will be limited, except in the case of invited guests, to 30 minutes, unless an extension of time is obtained from the presiding officer.

The constitution and by-laws, together with a list of the names of the members of the branch, will be issued in printed form, and a copy sent to each member.

C. L. Eddy made an interesting comparison of the pertinent features of the Edmonds and Hicks bills, both now before Congress and seeking to provide for the recognition of pharmacists in the United States Army. The Edmonds bill, according to Mr. Eddy, provided for a pharmaceutical corps which would be on an equal footing with the dental, medical and other professional corps in the U. S. Army. The Hicks bill does not mention a pharmaceutical corps, but would establish a department of pharmacy, with a colonel and perhaps a major, as the medical corps would provide. The Edmonds bill provides for a major, five captains and other commissioned officers, sufficient for an entire corps. Under the Hicks measure the entire department would consist of two officers, while the Edmonds bill provides for an enlisted personnel. The Edmonds bill was much more specific in outlining the duties of the pharmacist in the corps to be established, than was the Hicks bill of those of the pharmacist in the department of pharmacy it would legislate into being. Supposedly, the rank and rate of pay would be on the same basis in both bills.

Robert S. Lehman, chairman of the committee on education and legislation, reported that the New York Pharmaceutical Conference approved the amendment of section 233 of the State pharmacy law so that college of pharmacy graduates with two years experience might be admitted to examinations, which, upon being passed, would qualify them to be licensed as junior pharmacists. They could then operate a drug store during the absence of the proprietor, but could not compound prescriptions. At the end of their fourth year of experience they could take the regular pharmacy examinations. Mr. Lehman reported other legislation, including the ruling of the U. S. Attorney-General that druggists were entitled to the refund of the $1.10 non-beverage revenue tax, and might collect the same by applying upon form No. 47, which could be obtained from the internal revenue collector.

The legislative committee was instructed to represent the branch at a meeting of the New York Pharmaceutical Conference to consider the Edmonds bill, and also to attend the hearing at Washington on the same measure. It was the desire of some of the members that the branch should set a precedent for itself and actively represent its membership in pushing this measure which is considered of vital interest to pharmacy.

Secretary Hugo H. Schaefer proposed that a movement be started to provide a gold or bronze medal to be awarded each year to the man or woman who has done most for American Pharmacy during the preceding year. In making his proposal he referred to the Perkin and Nichols medals, awarded by the American Chemical Society and the Society of Chemical Engineering as the highest mark of honor for work done in the respective branches of science covered by these two organizations. He thought the scheme was meritorious and would prove advantageous for American pharmacy. The New York branch should take the matter in hand, and in order to make the presentation of the award permanent, steps should be taken to create a fund of $1,000, either by donations or by means of a sinking fund, the fund to be invested in Liberty bonds and the interest used to defray the expense of the award.

The committee of award suggested by Secretary Schaefer, should consist of all the past presidents of the A. Ph. A., and in case less than five such past presidents are surviving, then a sufficient number of past vice-presidents should be called upon to create a committee of five for making the award. No bar is to be placed as to any candidate's profession or to the kind of work accomplished. Mr. Schaefer thought that the consent and support of the parent association should be obtained for the proposition in order to give the movement a national aspect, although presentation of the medal should be made at a meeting of the local branch, when an entire evening could be devoted to the exercises.

In his report upon the progress of pharmacy, Dr. George C. Diekman referred to the vast losses incurred in the shipments of food to New York City, more than $500,000 worth being lost in this way during the month of January, most of the lost food being potatoes, Spanish onions, grapes, etc., none of which could be salvaged under present conditions.

Secretary Schaefer read a communication which presented Dr. A. L. R. Dohme's opinion upon a recent motion to the effect that research work be begun to establish substitute pharmaceutical formulas in order to conserve glycerin, sugar and alcohol. Dr. Dohme stated that elegant pharmaceuticals do not owe all their elegance to the three substances named, but that the strength and consistence of such preparations are maintained by the use of such products. Further, it was doubtful, he thought, if the manufacturers would consider the matter of a change to the use of substitute formulas, as in many cases the required experimenting would necessitate at least a year's work.

Dr. Hostmann gave an interesting talk upon his experiences as a member of the legislative committee of the New Jersey Pharmaceutical Association.

Chairman Frank L. McCartney, wearing the uniform of a captain in the army, presided. He is now a commissioned officer in the Medical Department of the National Army and has been assigned to the Medical Supply Depot, New York City. His presence at the meeting fitted in well with the discussion of the measures relating to pharmacists in the Army and gave a decided emphasis to the various points advanced. Treasurer Gustave Horstmann reported a balance of $261 in his hands belonging to the branch.

BALTIMORE BRANCH

(*Special to* The Pharmaceutical Era)

A well attended meeting of the Baltimore Branch of the American Pharmaceutical Association was held Feb. 20 at the Emerson Hotel. In addition to a considerable number of the Baltimore members there were present a delegation of about fifteen druggists from Washington, who came over to hear various matters discussed, among them the Hicks bill. Three or four of the Washingtonians made informal addresses on this measure, earnestly urging the druggists everywhere to get behind members of Congress and petition them to do justice to the profession and put it on the same plane with others that call for no more training and scholastic attainment.

The arrangements for placing in the National Museum the pharmaceutical exhibit were also discussed by the visitors, who were welcomed by Dr. John F. Hancock, the Nestor of the Baltimore druggists, and by Eugene W. Hodson, president of the Maryland Pharmaceutical Association and a member of the Thomas & Thompson Company.

E. F. Kelly, of the faculty of the Department of Pharmacy, University of Maryland, in discussing the Hicks Bill, emphasized its trend and probable effect upon schools of pharmacy, giving them greater standing and otherwise aiding the important work in which they are engaged by securing for their graduates those rewards which the graduates may reasonably and consistently ask for, since they spend as much time to prepare themselves for their vocation and are called upon to exercise as high a degree of intelligence as any other professional men.

Emil Schultze, a wellknown Baltimore druggist, made an address in which he undertook to elucidate some of the intricacies of the income tax, and was called upon to answer a number of questions covering points that have been obscure to pharmacists. Numerous questions that had troubled the druggists were thus cleared up. C. C. Neal presided and F. Lentz, the new secretary, who succeeded Miss Olive Cole, kept the minutes of the proceedings.

CHICAGO BRANCH

The ninety-fourth monthly meeting of the Chicago Branch was held Friday evening, February 22nd, 1918, at Kuntz-Remmlers Restaurant with about 40 members and visitors in attendance.

P. S. Mandabach and J. S. Bellack were received as new members.

Following dinner, the meeting was called to order at 8:30, President Craig presiding.

President Craig then introduced Dr. Edward Kremers who read the paper of the evening, "The Revision of the United States Pharmacopoeia; A Retrospect and a Prospect." The speaker reviewed briefly the history of our national standard pointing out that ours is one of the first of the national pharmacopoeial standards. The principal problems that confront us in the revision of the U. S. Pharmacopoeia are:

(1) The question of financing the expert labor required; and, closely associated with this,

(2) The frequency of revision; and lastly,

(3) The question of representation of the interested professions.

With the call of the next decennial convention, the U. S. Pharmacopoeial revision will have completed its first century of history. The present tendency toward centralization of power in Washington is another reason why pharmacists should not leave the initiative of pharmacopoeial revision reform to others, least of all to a possible new department in our national government in the organization of which they may not even have a voice.

Dr. Kremers stated that Government revision, for which abundant research was available, would be more authoritative and could by a continuous process of revision quickly eliminate errors and keep the work fully up to date. He suggested that the whole pharmacopoeia might well be printed on cards and that general revision at fixed periods be discontinued.

Prof. Robt. J. Fischelis expressed the opinion that at present in any of the Government departments that could take charge of this revision, pharmacy would have no voice whatever and it would not be advisable to turn over the revision until pharmacy had some official recognition in Government.

Professor J. A. Koch: We have a good U. S. P.; no better pharmacopoeia in the world, though many are government-revised. Can the Government better it? Will it be more prompt in giving us revisions? Our past experience does not so indicate. If pharmacy relinquishes now her right to a prominent position in pharmacopoeial revision, she will never regain such position.

P. A. Mandabach: The price of the pharmacopoeia should be reduced. 67% of the drug stores are without a U. S. P., last revision, today.

Professor W. B. Day: Our pharmacopoeia is the peer of any of the pharmacopoeias of the world. If pharmacy releases its control of revision will she have any power in an advisory capacity? Advisory boards are usually helpless; their advice is often not acceptable to the "powers that be." Pharmacy's loss of the U. S. P. will cerainly be taken advantage of by medicine and chemistry. But Government control is probably coming and Dr. Kremers has done a great service in presenting this matter to the Chicago Branch. Its consideration is timely. Let us build up pharmacy to a point where its recognition will be inevitable.

S. C. Henry: It is of the utmost importance that pharmacy should have oversight of pharmaceutical standards and if we need Government aid in the revision, we should initiate the movement, formulate our plans and present them in such an intelligent way that we could secure such assistance and research and still retain the hold of pharmacy in guiding and dictating the revision.

Dr. H. M. Gordin in a very striking talk upheld Dr. Kremers' ideas. He disagreed with the point made by Mr. Mandabach, saying that the reason 67% of the pharmacists had no pharmacopoeias was not because they couldn't spare the three dollars to buy one but because they were not sufficiently interested in the book to do so. The retail pharmacist with few exceptions, knows nothing of the pharmacopoeia and cares nothing for it. It is a public book of standards and could well be prepared by the Government.

Professor A. H. Clark: Much is said about the control of the U. S. P. by the pharmacist and what the pharmacist wants in the U. S. P. After all, it is a question of public policy and the U. S. P. should be made in the interests of millions of people all over the country, and not in the interest of some few thousands of pharmacists. If the Government can best serve the interests of all, then it is surely the one to revise the U. S. P. The Government would probably delegate the work to a few men and it has been suggested that under these conditions, self-interested manufacturers, politicians, grafters, etc., would have a hand in it. I feel that there is no more danger of this than under the present system, where a goodly number of the active members of the Revision Committee are manufacturers, and others, who may be interested in various ways. What the U. S. P. needs above all else is continuous, systematic, thorough and efficient research work in order to bring the tests and standards to the highest degree of perfection. Much evidence is found in the various revisions of the book of the lack of this. I feel that the Government could prosecute such work much better than a committee such as we now have. The necessary funds do not seem to be forthcoming from any other source.

Dr. Fischelis reported on the work of the National Pharmaceutical Service Association and stated that while there had been additional bills introduced covering the matter of a pharmaceutical corps in the army, yet any of the three were good and would materially advance the recognition of pharmacy in the army. The National Pharmaceutical Service Association is still working for the Edmonds Bill but stands ready to accept any legislation that will advance the cause.

The University of Illinois School of Pharmacy had on display a complete set of the U. S. P. from 1820 to date, also a set of Digest of Criticisms of the U. S. P. and N. F. and of the Circulars of the Revision Committee.

A. PH. A. RECORD OF LATE DR. CASPARI

A special committee appointed by the President of the American Pharmaceutical Association to formulate an expression of appreciation of the services rendered to that organization by the late Dr. Charles Caspari, Jr., of Baltimore, has submitted the following:

"Charles Caspari, Junior, 1850-1917: An appreciation by the American Pharmaceutical Association: For the loyal and unselfish devotion of more than the half of the years of his active manhood to the editing of its publications; for the twenty-three years of careful and conscientious service as its secretary; for his helpful attentions and courtesies to its officers and members, the American Pharmaceutical Association desires through a duly authorized committee, to make full and ample acknowledgement to his family, to pharmacy and the world.

"The Association would also give expression to the deep sorrow the death of Dr. Caspari brought to all of its members who knew him and would pay just tribute to his unusual abilities, broad attainments, sterling character and pure life.

"To such an end and for the purposes therein stated, the foregoing is most respectfully stated."

The names of the members of the special committee, H. P. Hynson, chairman; John C. Muth, George M. Beringer, Caswell A. Mayo, and J. H. Beal, are signed to the record of appreciation.

Invest in Victory—Buy Liberty Bonds.

Halifax Fund

Contributions for the relief of druggists who suffered losses in the disaster which visited Halifax in the early part of December last, continue to come to hand. Interest in this relief work has been stimulated largely by the efforts of the New York and New England Committee, organized by the presidents of the State Pharmaceutical associations of the Eastern part of the country. A number of meetings have been held since the movement was started, and some sections of the New England States have been quite thoroughly canvassed for funds. With but few exceptions, most of the subscriptions acknowledged below come from druggists located in various Connecticut cities and towns. The list is as follows:

Previously Acknowledged	$1,549 00
Retail Druggists Association of St. Lonis, Mo.	25.00
John E. Kelly, Middletown, Conn.	$1 00
C. W. Perkins, Waterbury, Conn.	1.00
McLinden Hilltop Pharmacy, Waterbury, Conn.	1.00
Waterbury Drug Co., Waterbury, Conn.	1.00
The Black Rock Pharmacy, Bridgeport, Conn.	1.00
Joseph P. Kinsella, Middletown, Conn.	1.00
Murphy's Drug Store, Middletown, Conn.	1.00
The Hartman Drug Co., Middletown, Conn.	1.00
George R. Cassidy, Middletown, Conn.	1.00
A. E. Shapiro, New London, Conn.	1.00
W. L. Colwell, Glastonbury, Conn.	1.00
J. H James, New London, Conn.	2.00
H. P. Buell, Colchester, Conn.	2.00
L. B. Collins, Rochester, N. Y.	1.00
William J. Coughlan, West Haven, Conn.	1.00
N. I. Noveck, New Britain, Conn.	2.00
S. M. Allen, South Norwalk, Conn.	2.00
Stillson, Powell Corp., Norwalk, Conn.	2 00
H. Glendening & Co., Norwalk, Conn.	2.00
A. L. Emhu, Stamford, Conn.	2.00
Wm. T. Marrose, Stamford, Conn.	2.00
J. Champagni, Stamford, Conn.	2.00
L. J. Wynn, New York City	1.00
J. K. Lawrence, Stamford, Conn.	2.00
David L. Stewart, Stamford, Conn.	2.00
Fred C. Holmes, Stamford, Conn.	1.00
Daniel E. Denham, Stamford, Conn.	1.00
C. E. Finch, Stamford, Conn.	2.00
Harold A. Mead, South Norwalk, Conn.	2.00
F. H. Baxter, South Norwalk, Conn.	2.00
Borg Brothers, Stamford, Conn.	2.00
G. Moutton, South Norwalk, Conn.	2.00
Dennis Hadorck, Norwalk, Conn.	2.00
W. C. Bano, Norwalk, Conn.	2 00
S. M. Allen, Darien, Conn.	2.00
John P. Colgan, Norwalk, Conn.	1.00
C. E. Buckley, So. Norwalk, Conn.	1.00
J. T. Maher, South Norwalk, Conn.	1.00
Joseph J. Rebock, Stamford, Conn.	1 00
Eli S. Troupou, Stamford, Conn.	1.00
Chas. Whittlesey Co., New Haven, Conn.	10.00
E. F. Leonard, New Haven, Conn.	1.00
Edward A. Visel, New Haven, Conn.	1.00
L. H. Merwin, New Haven, Conn.	1.00
Arthur J. Smith, New Haven, Conn.	1.00
Henry P. Lehr, New Haven, Conn.	1.00
Mark N. Sullivan, New Haven, Conn.	1.00
Joseph P. Deegan, New Haven, Conn.	1.00
E. J. McGuire, New Haven, Conn.	1.00
J. A. Natkin & Bros., New Haven, Conn.	1.00
Buckley's Pharmacy, New Haven, Conn.	1.00
T. J. Lynch, New Haven, Conn.	1.00
Theodore J. Beck, New Haven, Conn.	5.00
Otto C. Marx, New Haven, Conn.	1.00
Christian G. Visel, New Haven, Conn.	2.00
H. F. Flynn, New Haven, Conn.	1.00
Hine Morris, New Haven, Conn.	1.00
Joseph Soyhel, New Haven, Conn.	1.00
C. A. Stanford, New Haven, Conn.	1.00
The Hall Benedict Drug Co., New Haven, Conn.	2.00
W. G. McCrillis, Bristol, N. H.	5.00
A. W. Cunningham, Springfield, Mass.	1.00
S. S. Lightbody, Rochester, N. H.	5.00
R. M. Whitcomb & Co., Ashland, N. H.	1.00
H. A. Prescott, Meredith, N. H.	1.00
Donovan Bros., Newport, N. H.	1.00
Geo. F. Sanborn & Son, Meredith, N. H.	1.00
	$134.00
Total acknowledged to date	$1,683.00

According to the latest mail reports from Java the Japanese Government has approached the association of planters of cinchona bark for the allotment of a part of the production. In case these negotiations are successful, Japan will build its first quinine factory, thus becoming independent, if not a competitor of the Western world.

Credit and Commercial Case Decisions

By GEORGE H. MURDOCH, Newark, N. J.

Spendthrift Trusts—A spendthrift trust may be created as well for a woman as for a man.—101 A. (Pa.) 756.

Destruction of Books of Record—The rule that all things are presumed against the spoliator has always been applied with its utmost rigor and sternness.—197 S. W. (Mo.) 371.

Joint Stock Companies—A joint-stock association is not a citizen, and its status in the federal courts must be judged by the citizenship of its members.—243 F. (U. S.) 555.

Sales on Credit—Actual delivery and payment are not necessary to transfer the title to goods sold, as goods may be sold on credit and without delivery, if the parties so intend.—101 A. (Pa.) 741.

Representations Constituting Fraud—As a rule false representations, to constitute fraud, must relate to some material past or existing fact, and not to mere promises or statements of intention,—243 F. (U. S.) 289.

Doing Business Within State—An isolated or single sale of goods in a state by a foreign corporation, or even occasional repetitions of such sales, is not doing business within such state.—243 F. (U. S.) 706.

Fraudulent Chattel Mortgage—A chattel mortgage fraudulently taken in name of third person as mortgagor to deceive public is void, and its record not notice to subsequent purchaser.—93 S. E. (S. C.) 327.

Alien Enemies—An alien enemy resident in his own country is under disability during the war to institute and maintain a suit in this country, but this disability does not attach to alien enemies resident in this country.—243 F. (U. S.) 621.

Threats—A "threat" is any menace of such a nature and extent as to unsettle the mind of the person on whom it operates, and to take away from his acts that free and voluntary action which alone constitutes consent.—243 F. (U. S.) 785.

Means of Knowledge—The means of knowledge is the equivalent of knowledge, a rule applying when the circumstances of the case impose the duty of a reasonable inquiry, and even where it is not required by the express mandate of the statute.—76 So. (Ala.) 453.

Refusal to Work With Non-Union Labor—Members of unions may, by agreement, refuse to work with non-union labor, where the object is strengthening of their union, and not to injure the plaintiff, or non-union men it employs, though they are incidentally injured thereby.—101 A. (Conn.) 659.

Debt Due Citizen of Enemy Country—The state of war does not confiscate a debt owing by a resident to a non-resident citizen of an enemy country, though it may suspend the remedies for its collection through the courts or prohibit the transmission of the proceeds to the enemy country.—166 N. Y. S. 744.

Private and Common Carriers—The distinction between a public or common carrier of passengers and a special or private carrier is that the former must receive all applying for passage, so long as there is room and no legal excuse for refusing passage, while the latter is not so bound.—166 N. Y. S. 640.

Duty to Furnish Change—A telegraph company must be prepared to furnish change to a reasonable amount to a person desiring to send a telegram and able to offer only a bank bill in payment; the reasonableness, with reference to amount, time and place to be judicially determined.—166 N. Y. S. 740.

Intent of Parties as to Partnership—As between the parties, whether a partnership exists is a matter of intention, and if they intend a joint enterprise in which they engage to possess the characteristics of a partnership, it is so, whatever they name it, while, if they do not so intend, it is not a partnership as between them.—197 S. W. (Mo.) 356.

Enlistment of Minors—A minor's enlistment, without the written consent of his parent or guardian, when such consent is required, is not void, nor is it voidable by him, though he may be released from the service by a timely application of his parent or guardian, having a superior right to his custody or control. —243 F. (U. S.) 664.

Test of Insolvency—Unlike the common law, one is not insolvent under the Bankruptcy Act when the fair value of his possessions exceeds the amount of his debts, though he may not be able to discharge them when due in lawful money. Under the New York statute, "insolvency" is a general inability to answer in the due course of business the liabilities existing and capable of being enforced.—243 F. (U. S.) 637.

Monopolies—An indictment for combining and engaging in a monopoly in restraint of interstate trade and commerce need not set out any overt act, as the combination or contract in any form in restraint of trade constitutes the offense under the statute, and it is only essential to charge the combination or contract.—243 F. (U .S.) 730.

Sending Goods on Consignment—Where goods are sent to a dealer under a consignment, if title is to be reserved in the consignor, the goods should be so marked or identified, or of such a character as not to deceive innocent parties dealing with the consignee upon the strength of his having such goods as a part of his ordinary stock.—243 F. (U. S.) 733.

Ownership of Deposited Checks—Where checks indorsed in blank are deposited with a bank, and an immediate credit is entered in the passbook to the depositor, the checks at once become the property of the bank, but the bank's right to the checks depends upon the depositor's immediate and unconditional right, not merely as a favor, to draw upon the deposit, and, if the depositor did not have such right until collection, the bank did not become the owner; hence a bank does not become the owner of checks deposited with it, where the passbook expressly declared that deposits of checks should not be drawn against until collected. —243 F. (U. S.) 632.

Middleman—A broker is simply a middleman, within the meaning of the exception, when he has no duty to perform but to bring the parties together, leaving them to negotiate and to come to an agreement themselves, without any aid from him. If he takes, or contracts to take, any part in the negotiations, however, he cannot be regarded as a mere middleman, no matter how slight a part it may be. Nor does it make any difference that the price was fixed by his first employer. When a contract for double commissions is proved, the burden of proof is upon the broker to show that he was merely a middleman, and this not merely at the inception, but throughout the whole transaction.—164 N. W. (N. D.) 4.

Women in Pharmacy

CONDUCTED BY EMMA GARY WALLACE

A SUCCESSFUL WOMAN PHARMACIST

Miss Helen Way

Inheriting a special talent for pharmacy, as she comes from a family of physicians and pharmacists, Miss Helen Way, of Philadelphia, has always had a desire to become proficient in the science and art of compounding medicines. To this end she entered the Philadelphia College of Pharmacy and graduated an honor member of the class of 1917 with the degree of doctor of pharmacy. She was known among her classmates as a gifted and painstaking student throughout her course, and during her second year in college, served as assistant pharmacist at the Howard Hospital, Philadelphia.

Miss Way was born in South Seaville, Cape May County, N. J., and since her school days the acquisition of scientific knowledge has been a source of pleasure to her. She now looks forward to a career of usefulness for she feels that the woman pharmacist is serving her country well when she does her work well. She is one of the pharmacists in the employ of Powers & Reynolds, who have a large and modern drug store in the Tioga section of Philadelphia, Pa. Her career is indicative of the increased interest women are taking in pharmacy as a field in which they can earn a respectable livelihood and at the same time, co-operate in the world's professional work.

AROUND THE CIRCUIT

Annual Ladies' Night was enjoyed by the members of the Chicago Drug Club and their lady friends on the evening of Feb. 25. The affair was held in the spacious Louis IX Room at the Hotel Sherman. The Oxford Male Quartette was on hand and entertained with a wide variety in its range of melodies. Dr. Rufus A. White gave a splendidly illustrated stereopticon lecture on Russia—"A Venture In Democracy." Refreshments were served after the formal entertainment. Among those present were Secretary Henry and his wife, also Mrs. Otto Niethammer who has been ill for nearly a year. The affair was voted "The best ever."

Philadelphia Chapter No. 6 celebrated its Annual Birthday Party on February 14th. Mrs. Lee gave her Annual Tea. The day was beautiful and mild and the attendance very large and enthusiastic. Mrs. Leslie O. Wallace of Auburn, and Mrs. John C. Otis of Cincinnati, were to have been the guests of honor, but ill health prevented Mrs. Otis being present.

Mrs. Riemenschneider, the National President, remembered the occasion with a box of beautiful flowers for the hostess addressed "To my Valentine." It was interesting to remember that the Chapter had been organized twelve years earlier almost to the very day and hour, and that fully more than half of the original 100 charter members were present. This Annual Tea is one of the most looked-forward-to events of the Chapter year in Philadelphia. Because of war reasons, the Annual Dance was not held. Miss Ruth Sparks, the Scholarship Student of the W. O. N. A. R. D. was present at this time and also Miss Amanda Clapham, the woman student of the P. C. P. who took such high honors last year.

Queen City Chapter No. 5, W. O. N. A. R. D. held a memorable meeting February 27th, which celebrated the Eleventh Anniversary of the Chapter Organization. The ladies met at the home of their President, Mrs. Flora Katz. First they disposed of the routine business of the meeting, at the close of which a course dinner was served at five o'clock by a committee of eight. Washington Birthday souvenirs were used in the form of hatchets. The husbands of the ladies joined them at this dinner and hugely enjoyed the experience.

The evening was spent in card playing, dancing, and music. The fancy dancing of Mr. and Mrs. Charles Arnold was a work of art. The skillful card players were rewarded with prizes. The first prize, a pair of silk stockings, was won by Mr. Louis Werner. Mrs. Browne was awarded a handsome crocheted centerpiece and the booby prize, a neatly made handbag, fell to the lot of Professor Fennel. The committee in charge of the evening were: Mrs. Blezi, Mrs. Murphy, Mrs. Werner, Mrs. Lutterman, Mrs. Waldvogel, Mrs. Gansz, Mrs. Linesch, Mrs. Straus, and Mrs. Katz. The affair was voted a success from every standpoint.

St. Louis Chapter No. 8 has voted to send a substantial check to the Woman's Council of National Defense to help maintain the Soldiers' and Sailers' Club being established in that city.

Mrs. McMillian, Mrs. Ebeck and Mrs. Cox recently entertained the Mobile Chapter at the Cawthon Hotel. At this time pledges were made to raise money for the Red Cross Chapter at Spring Hill, and the ladies undertook to knit a comfortable and a handsome blanket to be used for the comfort of an Alabama soldier. Cards were played, Mrs. Sutton winning the first prize, a cut glass vase. The consolation prize fell to Mrs. Colvin. It proved to be a handsomely ornamented pair of knitting needles. A delicious plate luncheon was served.

A later meeting was held by the same chapter, at which time Mrs. McCarty and Mrs. Nelson were the hostesses. Mrs. Nelson greeted her guests in her own home. It was decided to pack a box with cake and candy to be sent to Alabama soldiers at Camp Wheeler Ga. A game of dice hearts was much enjoyed, Mrs. McMillian winning first prize, a choice box of stationery, and Mrs. Macon, the consolation prize, which proved to be a case of correspondence cards. A two course luncheon was served; the decorations were red japonicas and narcissus.

Cleveland Chapter No. 21 now boasts a membership of 110. This is a perfectly splendid showing for the Baby Chapter of the organization which looks forward to being the Banner Chapter for size in a short time. At a recent meeting the ladies were addressed by D. Rogoff of Western Reserve University, who spoke on the "Close Relation of Medicine and Pharmacy." Dr. Spease of the Cleveland School of Pharmacy, also

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Buy a Baby Bond for Baby.

spoke in the interests of School Co-operation on the Part of Druggists and Their Families. A Washington's Birthday Party was held and the attendance was large and enthusiastic.

Miss Emma Frick, President of the Louisville Chapter No. 11, has recently been honored by re-election to the Board of Directors of the Greater Louisville Building and Loan Association. This is a high testimony as to the regard in which Miss Frick's financial ability is held in her home city.

The aid of the Louisville Chapter has been sought by both Liberty Bond and Red Cross Committees of the city in their patriotic efforts, and the ladies have succeeded in having the local drug stores appointed as Registration Stations to register women for war work. Thus, the stores and their friends will be able to serve the country and a great many people will be brought into the drug store as well.

A March Indoor Picnic was held at the home of Mrs. Henry Schweitzer. The Chapter has recently contributed generously to the Babies' Milk Fund through the Federated Social Agencies.

Mrs. William Fischer, chairman of the Louisville Legislative Committee, has spent most of the winter and early spring in Florida in the hopes that the change of climate would benefit her small son and daughter who have both been ill for some time.

Indianapolis Chapter No. 20 are very active in patriotic work. Neither are they forgetful of directing their friends along the line of promotion of good feeling at home. They recently attended the meeting of the Marion County Pharmaceutical Association, enjoying it very much.

Miss Eliza Brackett, who has long conducted the West Medford Pharmacy for her brother-in-law, Mr. Samuel Highley, passed away at her home in Woburn, March 5th. Miss Brackett was smitten with a shock. She is much mourned by her many friends, not only for her professional worth but for her personal attainments.

Miss Irene Higgins, the pharmacist at the Boston State Hospital, was recently married to Mr. O. B. Peters, a wireless operator in the service.

The Women's Club of the Allied Drug Trade of Chicago, gave a Washington's Birthday Party at the Hotel LaSalle. This took the form of a philanthropic Card Party for patriotic work.

The January number of *Meyer Brothers Druggist* is worthy of passing comment, containing as it does a review of the industries of the drug trade in St. Louis and the resources of that city as a drug and chemical market. Many readers are doubtless familiar with the general conditions which have contributed to the greatness of the Mound City, but the part that the drug trade has played in this development has heretofore been somewhat submerged. They will therefore appreciate the many interesting facts that are recited in this number of our contemporary, the names of individuals, firms and companies and their histories carrying the conviction that Editor Whelpley has left no stone unturned to give the drug trade due credit for the part it has played in contributing to the material advancement of his adopted city.

Over the Top to the Third Line Trenches!

PRICE OF CAMPHOR GOES TO $1

Japanese Monopoly Limits Exports to United States—Efforts Made by Japanese Government to Encourage Refining of Product at Home.

The price of camphor is rapidly ascending to new high levels. The Japanese syndicate has cut down on shipments to the United States and has put the cost up to 90c a pound for bulk supplies, duty paid, laid down in New York. A series of price advances on the part of local dealers culminated recently in a single jump of 10c per pound, bringing selling figures in this market above $1.00. Supplies are available in sufficient quantities for present needs but buyers are reluctant to pay $1.00 to $1.05, the price demanded for spot goods.

Buying is limited to immediate requirements in most quarters. The market is dominated wholly by sellers who are holding prices very firm, at the same time predicting that camphor has a considerable distance to traverse before the top price of the present advance will be seen.

Conditions at the source have had a considerable influence on the American market. Notwithstanding the reported arbitrary conduct of the Japanese monopoly in cutting down the quota of shipments to this country, it is said that labor troubles in Formosa have introduced new complications and forced up the cost. The yearly production, while ample for all needs, has been assigned for other purposes by the syndicate, so that arrivals in the United States have not been as large as heretofore. It is understood that the Japanese Government is attempting to induce the camphor interests of that country to produce and export the finished manufactured articles instead of shipping out the raw material. The monopoly is curtailing exports to bring about this result. Not only regarding camphor is this new trend in Japanese export trade noticeable, but in practically all products which are destined for the outside world.

The celluloid industry in the United States has grown to enormous proportions and, in conjunction with Japanese makers, is now manufacturing a large part of the material formerly produced in Germany. Although Japan is undoubtedly the logical home for the production of celluloid, the industry in this country has become prominent since 1914 and the quantity of camphor consumed annually is very large. The American industry has assumed a position which must be reckoned with in consideration of the camphor situation. It is reported from Japan that some manufacturers of celluloid in that country are running on half schedule because of their inability to procure the large supplies of camphor which they require. They are unable at this time to contract further for export owing to old contracts being far behind in deliveries.

The price of camphor in the New York market had a serious setback last July, when American celluloid manufacturers over-estimated their needs and found themselves with excess stocks on hand. In attempts to realize on the goods, large quantities of camphor were thrown on the market, forcing the price down from about 90c a pound to 74½c. This weakness continued until November when the greater part of this surplus material had been absorbed and normal conditions returned. In December the price tightened up and began to climb back to its former position in the vicinity of 90c. This movement continued, hastened by news from primary markets of a short crop, until the present figure in excess of $1 has been reached. In two months the price has advanced practically 35 per cent. and it is universally predicted throughout the trade that continued higher figures will be seen until the underlying conditions are remedied.

Kultur Versus Culture

(*Continued from Page* 96)

but for the development of investigators, among whom are some, as he said, who might justly claim a permanent place anywhere. Agassiz has left an indelible impression upon American science by his original investigations but he did even more, as under his tutelage a great many young men received their great inspiration, and they have in their work builded the biological laboratories in America which today are the foremost in the world, and in which are being trained some of the most eminent men of science. My thoughts went back to the lives of a few of the men whose names are emblazoned in our history. We are the descendants of the explorers, pioneers, and those valiant men who came to this country to establish their fortunes and provide liberty for their children. To an investigator the life of Columbus is one inspiring peculiar interest. With all the uncertainties of the western horizon, with all of the possibilities of ill luck, and all the probabilities of failure, he dared to set out on a venture that every man with a rational mind would predict as doomed to failure. If there was no divination guiding him, if there was no Providence to protect him, it was the most stunning resolve and the most heroic action of any man that ever lived. Columbus had the spirit of an investigator, and his life and work is deserving of the careful study and emulation of every man who would enrich the world by his initiative and resourcefulness.

Then there were the names of other men who had appealed to my fancy that came to mind, and some of these had fought for true liberty as opposed to the German conception of *Freiheit*. They were the men who fought for personal independence, and constructed a government based upon the inseparable principles of liberty and law. Patrick Henry's speeches amid the early struggles of our republic are deserving of repetition at this time. On one occasion he said, "I am not a Virginian; I am an American." His speech in the Virginia Convention in 1775, like that of Lincoln's at Gettysburg, shows a high minded and broad spirited patriot. It is one of the most persuasive, logical and powerful speeches ever made. He begins, you remember, by saying, "It is natural to man to indulge in the illusions of hope. We are apt to shut our eyes against a painful truth and listen to the song of that siren until she transforms us into beasts. Is this the part of wise men, engaged in a great and arduous struggle for liberty? Are we disposed to be of the number of those who, having eyes see not, and having ears hear not, the things which so nearly concern their temporal salvation? For my part, whatever anguish of spirit it may cost, I am willing to know the whole truth; to know the worst and to provide for it. I have but one lamp by which my feet are guided, and that is the lamp of experience. I know of no way of judging of the future but the past. * * * If we wish to be free, if we mean to preserve inviolate those inestimable privileges for which we have been so long contending, if we mean not basely to abandon the noble struggle in which we have been so long engaged, and which we have pledged ourselves never to abandon until the glorious object of our contest shall be obtained—we must fight! I repeat it, sir, we must fight! * * * It is in vain, sir, to extenuate the matter. Gentlemen may cry, peace, peace, but there is no peace. The War is actually begun. The next gale that sweeps from the north will bring to our ears the clash of resounding arms. Our brethren are already in the field. Why stand we here idle? What is it that gentlemen wish? What would they have? Is life so dear, or peace so sweet, as to be purchased at the price of chains and slavery? Forbid it, Almighty God! I know not what course others may take, but as for me, give me liberty or give me death!"

As we view the achievements and progress of our country, and as we take a careful inventory of the list of our heroes, and geniuses, we must take peculiar pride in the growth of our native land, and recognize that America has been a leader among nations because of the accomplishments of good heads in the early days of our country. Furthermore, we realize that it is given into our hands to preserve inviolate the heritage which has been handed down to us, and it is going to require very good heads to direct the affairs of the nation in the future. The duty of the university is to train the minds of the men who shall occupy the posts of responsibility in the affairs of the nation, as well as in its industrial life. Fortunately connected with our universities we have agencies like the fraternities which will inspire our young men to lay deep hold on the great problems of life and solve them in the interests of humanity. Furthermore, in the recreation of the students at the university as well as our people generally, there is a balance which enables us to retain a sane view as to what are the real purposes of life.

Possibly I have not made clear the principal object of this address, and yet I think that the question must come to each of us: "What is the object of achievement, what is real success, and what are the true fruits of civilization?" It seems to me the Huxley well expressed the prime objects of life when he said, "Learn what is true, in order to do what is right, is the summing up of the whole duty of man." Too often, as Winston Churchill has well said, "We have failed to grasp the truth that happiness lies—and lies alone— in self-realization, that the acquisition of wealth, that the triumph of man over nature is merely accessory to happiness." It is comparatively easy for a man to produce a master work but it is difficult for him at the same time not to get out of touch with his fellows. One can become too much wrapped up in his work so as to lose his perspective of life. We do not always realize that it is possible for a man to be a genius and a humanitarian too. It has remained for the sanest and most lovable of New England writers, Oliver Wendell Holmes, to forcibly and happily express the qualities need for a successful life. In his "Autocrat of the Breakfast-table," he says, "Reason may be the lever, but sentiment gives you the fulcrum and the place to stand on if you want to move the world."

WHITNEY NARCOTIC BILL

The Whitney Legislative Narcotic Drug Committee has submitted the proposed amendments to the present narcotic bill to the New York State Legislature. As the result of testimony received by the committee while sitting at New York, the additions to the old Whitney bill are for the purpose of perfecting that measure and so modify it so as to permit handling all phases of the prevention and cure of drug addiction.

Provision has been made for a state department of narcotic drug control with a commissioner and three deputies at its head and an institution for the treatment and investigation of drug addiction. Various "cures" are to be investigated scientifically and upon the result of the experimentation of the State institution, the most reliable and valuable of the treatments is to be adopted as official.

Several defects have been noted in the revised bill and have elicited considerable criticism throughout the trade. Section 427, paragraph 4, distinctly limits the quantity of any narcotic drug allowed to be dispensed by a druggist on a physician's prescription and then practically wipes away all limitations by saying: "Also upon a like prescription if it contain any of such drugs in excess of said respective quantities if it be stated upon the prescription that it is to be used in the treatment of a surgical case or a disease, other than drug addiction." That is, a druggist may dispense narcotics to any amount provided the prescription says that it is not for the use of a drug addict.

Patents and Trade Marks

TRADE MARKS

Published 1918

107,799—Wilson Chemical Co., Council Bluffs, Iowa. Disinfectant.
107,839—Joseph M. Hollander, Rankin, Pa. Laxative.
107,870—Koman Tablet Co., Columbus, Ohio. Laxative preparations.
107,900—Turkish Remedy Co., Brooklyn, N. Y. Remedy for corns.
107,931—Albert E. Brown, Mobile, Ala. An antiseptic mouth wash.
107,941—Park Gilmore, Inc., Covington, Ky. Rouge.
107,990—Purity Products Corporation, Boston, Mass. Tablets for skin eruptions.

Published Jan. 29, 1918

98,856—The Black Medicine Co., San Diego, Cal. Preparation for diseases of the stomach.
99,070—Spicer Brothers (Colonial and Foreign) Ltd., London, England. Chloride of lime, tartaric acid, etc.
101,643—Isadore M. Fischer, Jr., Savannah, Ga. Medicines for malarial fevers, colds, etc.
103,038—Anchel Oxer, Tompkinsville, N. Y. Salve for boils, carbuncles, etc.
103,280—Balfour, Guthrie & Co., San Francisco, Cal. Orchard sprays.
103,944—Mary De Bar, St. Paul, Minn, Medical compound for inflammation of the kidneys and bladder, backaches, and dropsical tendencies.
104,578—The Holliday Chemical Co., Pittsburg, Pa. Composition for treatment of wounds, cuts.
105,387—Drs. F. G. & J. C. Smith, Betbany, Mo. Medical preparation for treatment of asthma, hay-fever and bronchitis.
105,638—The Amen Chemical Scientific Institute, New York, N. Y. Pills and ampuls for tubercular affections.
106,607—The William S. Merrell Chemical Co., Cincinnati, Ohio. Toilet cream and dental cream.
106,626—John Varga, Linden, N. J. Palliative for rheumatism.
107,120—Albert Minty, London, England. Toilet creams.
107,199—Arnold Krauss, Los Angeles, Cal. Hair-tonic.
107,320—Lash's Bitters Co, New York, N. Y. Tonic bitters.

Published Feb. 5, 1918

104,554—Lynn Rubber Manufacturing Co., Lynn, Mass. Foot-powder.
104,632—Society of Chemical Industry in Basle, Basel, Switzerland. Pharmaceutical preparation to be used as an antipyretic, etc.
106,106—Madame M. Brooks, Des Moines, Iowa. Preparation for the hair and scalp.
106,548—Williams. Bros. Chemical Co., St. Louis, Mo. Medicine used for the prevention and cure of vaganitis, etc.
106,749—Yardley & Co., Ltd., London, England. Perfumes, face-powders.
107,102—G. W. Carnrick Co., New York, N. Y. Medicinal tonic.
107,750—Kloczewski & Co., Washington, D. C. Preparation for malaria, colds and grippe.
107,811—Gerhard Mennen Chemical Co., Newark, N. J. Toilet and talcum powders, bath-powder.
107,816—Nicholas Ottaviano, Pittsburgh, Pa. Scalp remedy and hair-tonic.
107,852—Peter Schlosser, Louisville, Ky. Medicinal preparation for indigestion and disorders of the stomach.
107,896—William H. Kant, Brooklyn, N. Y. Preparation for urinary troubles.

CHLORAZENE, THE NEW ANTISEPTIC

Dr. H. D. Dakin has established the value of the chlorine-carrying compounds as antiseptic agents, these compounds being superior to bichloride of mercury and carbolic acid without any of the attendant dangers accompanying the use of these powerful germicides. The most convenient of the antiseptics introduced by Dr. Dakin is para-toluene-sodium-sulphochloramide, best known in this country under the name of "Chlorazene." In Dakin & Dunham's "Handbook of Antiseptics," it is stated that this antiseptic is more powerful, when tested on blood-serum-muscle-extract cultures of the staphylococcus aureus, than mercuric chloride, silver nitrate, argyrol, zinc chloride, hydrogen peroxide, phenol, and other common antiseptics. It is stated that a 2 per cent. solution of this antiseptic will accomplish in five minutes what it requires 24 hours to accomplish with a 1: 1,000 solution of mercuric chloride.

In using Chlorazene there is practically no danger of poisoning. It is used as a gargle or spray in all forms of sore throat, diphtheria, meningitis, scarlet fever, etc.; in skin diseases; to wash infected wounds, as an irrigant, on compresses, as a dusting powder (Chlorazene Surgical Powder), and as a paste (Chlorazene Surgical Cream). It is also recommended as an effective antiseptic in genitourinary diseases, as a cleansing agent in the treatment of diseases of women, and as a deodorant and germicide in cancer and malignant sores. Samples of Chlorazene will be sent without charge to any physician, dentist, veterinarian or druggist on application to the home office of The Abbott Laboratories, Chicago.

SAFEGUARDING SMALLPOX VACCINE

For the past fifteen years the H. K. Mulford Company of Philadelphia has furnished Smallpox Vaccine in sealed glass containers—either in capillary tubes or in the new improved tube point, because this firm recognized the danger of furnishing smallpox vaccine in any but hermetically sealed containers if contamination was to be prevented. The Mulford Tube Point is without doubt the greatest improvement that has been made in perfecting a smallpox vaccine container in recent years. This tube point is made entirely of one piece of glass, which is easily sterilized. The vaccine is hermetically sealed within the tube point and cannot be contaminated. As the name indicates, the container is drawn to a point which can be used for scarification. After scarification, the point can be broken off and the other end of the tube is also broken off, and by means of a small rubber bulb placed over the end of the tube the virus is expelled directly on the scarified area. Besides guarding against contamination, the use of the tube point makes vaccination easy, rapid and convenient.

"NORWICH" MILK OF MAGNESIA

Attention is called to the Milk of Magnesia manufactured by the Norwich Pharmacal Company, which the manufacturers state contains not less than 40 grains of magnesium hydroxide in each fluid ounce, suspended in distilled water, without the addition of gums, glycerin or other mucilaginous substances. The manufacturers state that the amount of hydrated magnesia found in the ordinary milk of magnesia varies widely, some containing as little as 18 grains, while others have 24 and even 30 grains to the ounce. As this magnesium hydrate is the only therapeutic agent in Milk of Magnesia, it is certain that the Norwich preparation, with its greater magnesium hydrate content, is more efficient than an ordinary product. Specify "Norwich" on your orders for Milk of Magnesia.

CARTON PACKAGES FOR PEROXIDE

By placing their four-ounce bottles of hydrogen peroxide in cartons, Parke, Davis & Co., have taken a step that is certain further to popularize their peroxide. The carton protects the peroxide from the deleterious effect of light, affords security against breakage in handling, and by means of the printed matter, which appears on all four sides of the carton, suggestive information on the varied uses of peroxide is given together with definite directions for its employment. The carton advertises peroxide in the most effective way imaginable and druggists will do well to give this new package a conspicuous place on their shelves.

HUGH CRAIG JOINS NYAL COMPANY

Hugh Craig, for the past five years editor and business manager of the *Journal of the N. A. R. D.*, will on April 1 sever his connection with that publication to become affiliated with the Nyal Company of Detroit. He will have charge of the advertising and publicity departments of the latter concern.

ESTABLISHED 1887

THE PHARMACEUTICAL ERA

AN ILLUSTRATED MONTHLY PUBLICATION FOR THE DRUG TRADE

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A BINDER
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STATUS OF THE EDMONDS BILL

The result of the hearing on the Edmonds bill to create a Pharmaceutical Corps in the Army, held before the Committee on Military Affairs of the House of Representatives on March 19, is not yet apparent, as no legislation has since come to the surface in Congress that would show to what extent the members of the Military Committee had been impressed by the arguments of the various speakers at the hearing who favored the passage of the measure. Whatever may be the outcome of the effort the drug trade has the satisfaction of knowing that none of its members presented a discordant voice, the speakers representing the manufacturing pharmacists, the wholesale drug trade, pharmaceutical educators, retail pharmacists and physicians before the committee presenting a unanimous demand that Congress should give to the Army the services of educated and trained pharmacists with all the rank and pay that go with such work. It is the belief of every patriotic citizen that our fighting men should have the best of care for their health. That a Pharmaceutical Corps organized along the line proposed by the Edmonds bill will furnish such service is the conclusion of all those who have taken the time to investigate the subject. Let us hope the bill will become a law.

GROWTH OF THE PRE-REQUISITE IDEA

The State of Virginia, in passing at the recent session of the General Assembly an act to regulate the registration of pharmacists, puts that Commonwealth in line with a considerable number of other States which have required, some of them for several years, graduation from a college of pharmacy as a prerequisite to examination and registration to practice pharmacy. The new statute does not become effective immediately, but gives to those who are already in training time to complete their training under the requirements of the law which the new act supersedes. In other words, the new act does not become operative for four years, thus giving those who have been preparing the opportunity to complete their registration under the conditions which obtained when they began. From the fact that the bill previous to enactment had the official endorsement of the State Board of Pharmacy, the State Pharmaceutical Association and the Medical Society of Virginia, it may be taken for granted that the desirability of the new law was generally recognized by those most competent to judge of its probable benefits.

To one who has followed the trend of educational development for the past twenty-five years, the growth of the college idea in pharmacy is a natural sequence. In this forward movement a large number of pharmacists themselves have been most active, some of them showing a remarkable educational spirit and an honest belief that a professional knowledge of pharmacy could only be reached by those who, as a class, had a sound fundamental education, plus the scientific training that would place them on a parity with other professions. The value of laboratory methods of instruction as a means to this end were early recognized, and every facility was offered by many colleges in order that the would-be pharmacist might acquire a thorough knowledge of the scientific side of his calling and apply it in his practice. The idea has so progressed in recent years that it clearly indicates the direction of future pharmaceutical development in this country, and it now seems as though the time was not far distant when entrance to the pharmaceutical profession would only be granted to those demonstrating real claims to scientific qualifications.

There is good foundation for the belief that this progress is to become more evident as the years roll by. In the reconstruction period that is to follow the present great war, the end of which no one now can foresee, there will be problems presented which will call for ability of the highest order, and pharmacy will not be excepted from this great demand. Our country is already calling upon its educators and research workers for highly trained men to meet the conditions of today, and the conditions of the future will demand all of the resources of scientific attainment. The pharmacist who has long believed that pharmacy had a professional future will find much to his way of thinking in the recent developments of pharmaceutical legislation. The enactment of the Virginia law indicates the direction which future progress will take.

PROGRESS IN PHARMACEUTICAL RESEARCH

Coincident with the announcement made last October that the American Pharmaceutical Association had made arrangements for the establishment of a fund for pharmaceutical research, came the news that the University of Iowa College of Pharmacy had engaged a research assistant to discover processes that might be commercially possible for the manufacture of chemicals that had become extremely expensive or unprocurable in this country because of the war. This information was indicative of the conclusions of many professional pharmacists and observers that scientific research in the domain of drugs and chemicals was needed more than anything else to put pharmacy on a plane with other professions, and to help out the country in its time of need. Those who have watched the growth of this sentiment now feel that a real beginning has been made, as shown by Mr. Konantz's paper on another page.

SPHERE OF BOARD OF HEALTH ACTIVITIES

The action of the New York City Department of Health in adopting in 1915 as an amendment to the sanitary code a regulation popularly known as the "Goldwater" or "Formula disclosure ordinance," attracted wide attention from manufacturers and dealers in proprietary medicines throughout the country, who saw in the measure what they believed to be an attempt to throw into the hands of the medical profession the control and sale of proprietary remedies. The non-success of this effort is now well known, the Appellate Division of the Supreme Court of the State having held the ordinance to be legally objectionable and invalid, a decision from which a further appeal has been made by the corporation counsel. Now, at the instigation of the mayor, the Department itself is being made the subject of an investigation to determine the value of its activities, and to show whether all of its projected work is really necessary in the effort that is being made to effect greater economies.

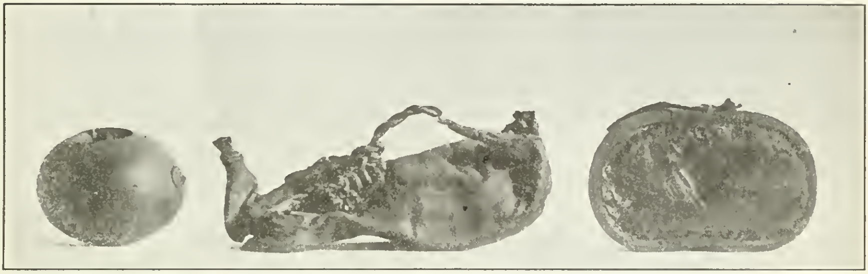
The investigation so far has developed no reference to the board's activities in seeking to obtain the formulas of proprietary medicines, but it has been directed against the Bureau of Public Health Education, maintained by the Department, which the investigators characterize as the "press agency of the Department," and recommend that it be abolished. The evidence at the hearing up to the time of this writing goes far to show that proper publicity of the work of the board is to be desired, and that in the matter of general education pertaining to public health, a bureau of health education charged with these duties is a proper function of the board of health. Dr. Goldwater, who was called in to give his testimony as an expert, stated that most newspapers were willing to devote a large part of their space to the exposition and control of disease when the material is furnished by competent authority, a method which has contributed greatly to the dissemination of knowledge as to health measures and for the public good.

In this contention, we belief, most pharmacists will agree, for all pharmacists are deeply interested in public health measures. Few, if any of them, fully approved of the method adopted by the Department of Health in its attempt to regulate a commercial business that properly comes under the legislative function of the State, but they recognize all legitimate efforts of boards of health that concern the public good. A distinguished observer has said that "public hygiene and preventive medicine occupy a field quite apart from systems and schools of medicine," and with this dictum most pharmacists will also agree. Physicians are interested in these subjects to be sure, for one can hardly conceive of health measures apart from those enunciated by medical men. But there are many lines of activity outside of the medical profession which directly concern the public health, and experience goes far to demonstrate that legitimate publicity and educational propaganda are necessary, if the boards of health are to create a receptive interest in their work and to properly exercise the powers conferred upon them by statute.

The Pharmacognosy of Aloes

Some Confusion as to Identity of Plants Producing Drug, but U. S. P. Recognizes Only Three Commercial Varieties.

By HEBER W. YOUNGKEN, Ph.G., Phil.D.,
Professor of Botany and Pharmacognosy in the Philadelphia College of Pharmacy.



Containers used in the shipment of two commercial varieties of Aloes. The central figure is that of a sewed-up monkey skin containing Zanzibar Aloe. To the left is a hollowed out gourd containing the Curacao variety, while to the right of the central figure is to be seen half of a gourd-shell containing Curacao Aloes.

ALOES, one of the most valuable purgatives and emmenagogues in use by the medical profession today, was not unknown to the ancient Greek and Arabian physicians. It apparently was well known to Pliny, Dioscorides and Celsus, for all of these make mention of the drug in their writings. According to the Arabian geographer Alidrisi, when Alexander had conquered the king of the Persians and had completed his conquests in India, his master Aristotle recommended him to seek the island of Socotra that produces aloes. Here Alexander is said to have established a colony of Ionians who acquired great riches in the aloe industry.

While the first aloes used was that obtained from Socotra, there have later appeared on the market the Curacao, Cape, Natal and Jaffarabad varieties, as well as certain liver-colored (hepatic) forms of three of these, viz., Zanzibar, Barbadoes and Uganda Aloes.

In the past a long list of species has been quoted as yielding this drug. Much confusion prevailed as to the identity of the plants from which the drug was obtained. While the United States Pharmacopoeia IX specifies the botanical origin to be *Aloe Perryi*, *Aloe vera* and *Aloe ferox*, there is a strong possibility that other species have contributed to the source, on account of the carelessness reported to be practiced amongst natives of aloe producing countries to whose care the collection and preparation of the drug is largely entrusted.

Plants Yielding Official Commercial Varieties

The commercial varieties recognized by the U. S. P. IX are Socotrine, Curacao and Cape.

Socotrine Aloes is a product of the island of Socotrine, India, and East Africa. It is yielded by *Aloe Perryi*. This plant, according to Professor Bayley Balfour of Glasgow, was found widely spread through the island of Socotra, especially in limestone tracts, ranging from sea level to an altitude of 3,000 feet.

Its subterranean portion consists of an extensive fibrous fascicled root system. Its aerial portion comprises a trunk rosette of thick succulent leaves and a raceme of flowers. As observed by Baker, the trunk attains a length of a foot and a diameter of one and a half to two inches. The succulent, lanceolate leaves are twelve to twenty in number and form a dense rosette at the summit of the trunk. They attain a length of one foot and a breadth of three inches at the base from which they taper gradually to an acuminate apex. They are channeled on their upper surface and exhibit small deltoid marginal spines about one quarter of an inch apart. From the center of the leafy rosette there arises a raceme one and a half to two feet long. The peduncle part of this is purplish, the pedicels red. The flowers which are borne upon the pedicels are tubular. They exhibit a cylindrical perianth of a brilliant red color with a green tip in their early stage, turning yellow upon maturity. The stamens are unequal. Both stamens and style are slightly exserted. The fruit is a membranous capsule.

Curacoa Aloes is the product of *Aloe vera* which grows in Curacao and other islands of the Dutch West Indies. Its leaves are long and narrow, spiny along the margin, two inches in thickness and four inches broad at the base, when full grown. In color, they are pea-green and when young are spotted with white. Its bright yellow tubular flowers are arranged along a slender loose spike. The stamens frequently stand out beyond the perianth tube.

Cape or Great Hedge Hog Aloes is yielded by *Aloe ferox*, a native of the Cape of Good Hope in South Africa. This plant, the loftiest of the whole genus, sometimes attains a height of nearly twenty feet, the trunk below the rosette of leaves having been observed up to three feet long. The leaves produce spines from every part, but stouter, longer, sharper and more curved ones are produced along the margins and in a line along the middle of both the ventral and dorsal surfaces. The striped whitish flowers are tubular and borne upon a spicate inflorescence.

Histology of the Leaves

The leaves of all species of the genus Aloe are of the succulent, xerophytic centric type. Either of the plants furnishing the official drug has leaves which when examined microscopically exhibit the following structural peculiarities:

A covering layer or epidermis containing scattered stomata, each surrounded in Aloe ferox by four neighboring cells. The outer walls of the epidermal cells are strongly cutinized. Beneath the epidermis is the mesophyll which is differentiated into an outer cortical and an inner central zone. The outer cortical zone comprises several layers of chlorenchyma cells containing chloroplasts; the inner zone is composed of large, clear, thinner walled cells, rich in mucilage

On the border of the clear central and outer cortical zones are to be noted an ellipse of fibrovascular bundles. Each of these is accompanied by a number of long tubular thin-walled cells containing a bitter juice which, when inspissated, constitutes the drug. The writer has observed cells in the bundles themselves, the contents of which took on a red coloration when a 5 per cent. solution of potassium hydroxide was applied. This would seem to show that the bitter juice containing anthraquinone derivatives is found not only in the cells accompanying the bundles but in certain cells of the bundles themselves. Raphides of calcium oxalate are present in both cortical and central zones, but far more abundant in the cortical region.

Preparations of the Crude Drug

In the preparation of the drug, although the leaves of the aloe-yielding plants (*vide supra*) are cut from nine, ten or twelve month old plants, they are not usually in the best of shape until the second or third year. When the soil is properly manured the plants have, in numerous cases, been found productive for ten or twelve years.

In March or early April workers go out into the aloe fields. Each begins by grasping a bunch of blades, cutting them off at their bases. In the Dutch West Indies they are then quickly placed, cut end downward, in a V-shaped trough several feet long and a foot or more thick. This is then arranged on an incline, so that the juice in trickling from the leaves runs down the sides of the trough and through an aperture at its lower end into a receptacle placed beneath. When the receptacle is filled with the juice, the latter is poured into a cask and evaporated spontaneously or reserved for later evaporation with the aid of heat. The latter process is accomplished by bringing the juice to a boil in copper vessels. As soon as the juice has thickened to a sufficient degree, it is poured into large gourd-shells or boxes and allowed to harden.

An inferior method sometimes employed is that of expressing the juice from the leaves, afterwards boiling it with water, evaporating and pouring into gourds. This is usually known as the "common" or "ground" aloes.

In Cape Colony the worker prepares a hollow in the ground and spreads therein a goat skin. He then cuts off the Aloe leaves and arranges them, cut surface inward, around the margin of the excavation until there are several radial series of leaves. The skin, upon being nearly filled with the juice from the leaves, is lifted from the ground and its contents emptied into a cast-iron pot and boiled until the proper consistency has been reached. It is then poured into the shells of squirting cucumbers or into boxes and allowed to harden.

In Zanzibar, the juice, after being collected and boiled to the proper point, is poured into monkey skins.

At the present time, as far as the writer has been able to learn, the Socotrine aloes is produced largely in Zanzibar and India, and is usually shipped to Europe, thence to the United States. The Cape aloes coming from Cape Colony, is also sent to Europe, being exported from Cape Town, thence to the United States. The Curacao or West Indian Aloes, produced in the islands of Curacao, Bonaire and Aruba of the Dutch West Indies, is shipped direct to the United States. Most of the aloes, coming into our country at present is of this variety.

Characteristics of Important Commercial Varieties

Socotrine aloes is found in the form of yellowish to dark-brown masses, sometimes soft. It is readily broken into pieces with a somewhat conchoidal fracture and sharp edges. Its odor when recent is disagreeable but upon aging it develops an odor resembling a mixture of saffron and myrrh. Its taste is nauseous and bitter. The powdered drug has a yellowish-brown to darker-brown color and when mounted in a fixed oil and examined microscopically exhibits yellowish-brown to reddish-brown irregular fragments. When treated with nitric acid on a white surface it forms a yellowish-brown to reddish-brown solution.

Curacao or West Indian aloes occurs in orange to blackish opaque masses. Its fracture is irregular exhibiting an uneven, waxy, sometimes resinous surface. Its odor is characteristic and its taste bitter, nauseous. The powdered drug is reddish-brown and more or less opaque. When mounted in a fixed oil and examined under a microscope, it exhibits numerous reddish-brown to blackish, opaque, angular fragments. It dissolves quickly in nitric acid forming a deep red solution.

Cape aloes comes into the market in olive-black or reddish-brown masses frequently covered with a yellowish powder. Its fracture is sharp, exhibiting pieces with a smooth and vitreous broken surface. It has a distinct odor and a bitter taste. The powdered drug is pale greenish-yellow becoming light-brown upon aging. When mounted in a

(*Continued on page 122*)

Poisonous Plants as Sources of Insecticides

Their Effectiveness, Availability and Supply.

By ARTHUR F. SIEVERS, Washington, D. C.

AMONG horticulturists, farmers, and users of insecticides in general, there has developed in recent years a desire to find suitable substitutes for the arsenicals which are at present so extensively used for combating insect pests. While the arsenicals have given general satisfaction in so far as regards their efficiency as insecticides there are several undesirable features involved in their use. The cost of the arsenic preparations, especially in the last few years, has been very high. The poisonous nature of these substances towards man and beast which necessitates a great deal of care in their application to food stuffs and the burning of foliage and delicate plants resulting when they are applied without due caution are other undesirable features of the arsenic preparations. To sum up the situation there is a demand for a class of insecticides which meet the following general requirements (1) efficiency, (2) harmlessness towards the material on which it is used, (3) cheapness, (4) ease of application.

There are in the vegetable kingdom thousands of plants which are known to be poisonous to man and animals and probably many more, which, while not toxic towards the higher forms of life, still possess toxicity towards insects. It seems logical that among such a vast amount of material in the vegetable world there should be at least a few which possessed the necessary attributes to make them useful in man's constant struggle against insect depredations. There are, of course, some well recognized plant insecticides but while they are very effective their effectiveness is limited to a very small field or to a certain class of insects only. Thus nicotine is usually considered a plant insecticide because the commercial preparations are in the form of concentrated extracts of tobacco with a high nicotine content. This substance possesses great efficiency but its volatility and cost limit its application to a very great extent. Quassia is another example of a contact insecticide which has only a very limited use. Then there is the *Chrysanthemum cinerarefolium* or insect flower which is of undoubted value as a dusting powder but in this case the material is limited largely to household uses. In the same class is hellebore. Several other plants might be mentioned which have been used in various parts of the world for special purposes in a limited way. None of those mentioned, however, possess all the requirements named above which are necessary to make the material universally effective and practical.

Qualifications for a Practical Plant Insecticide

The various qualifications which a plant must possess in order to make its use in the form of an insecticide practical may be considered under the following heads. (1) effectiveness, (2) technique necessary to make material applicable, (3) availability and supply.

Effectiveness. This is of course the first thing to be considered. The material is, as a rule, tested first in the laboratory in a preliminary way, the first step being usually to determine its action when applied as a powder to various insects. Then the powder may be used in sprays in suspension. These tests will indicate whether the material is of a nature suitable for direct application without the preparation of extracts. The testing of water extracts or decoctions with or without the application of heat is next to be considered. If a plant contains a toxic substance such a substance must be at least partially soluble in water in order to make the decoctions effective. This necessitates a chemical study of the toxic constituents to determine their solubility and devise methods of extracting such substances by methods which are both cheap and adaptable to large scale operations. When such a method has been found and the extracts or preparations of toxic substances have been found effective when applied to insects in the laboratory the preliminary steps are completed and field tests must then be made and if such tests indicate satisfactory results the question of effectiveness has been settled.

Technique necessary. As has already been stated a method must be found for cheaply and practically removing the toxic substance from the plant in cases where the material can not be used as such. This involves the question of solvents. As a rule some organic solvent is necessary and the question of expense is of great importance. A difficulty likely to be encountered where organic solvents are required is the question of applying the toxic extracts obtained by means of such solvents. Water will not, as a rule, redissolve such extracts and consequently water extracts which can easily and cheaply be applied can not usually be prepared in that way. A modification of this method can often be used whereby the toxic substances are brought in to a very concentrated solution in some suitably organic solvent and this concentrate then mixed with a large quantity of water, this procedure resulting in a fine precipitation which by agitation can be held in suspension while being applied as a spray.

Availability and supply. Plant material which has been found to possess satisfactory insecticidal properties must, in order to be of practical importance, be available in large quantities. Much depends on which part of the plant is to be utilized. The leaves and branches constitute the most convenient and the roots the least convenient portion. The digging of the roots is expensive and has the further disadvantage in that it usually results in the destruction of the plant, a procedure which will tend to exhaust the supply. On the other hand leaves and branches can be gathered without material injury to the plant and with much less expense. The use of the fruit would have the same advantages but would not yield as great a quantity. The size of the plant is, of course, of prime importance and likewise the length of life of the plant. A perennial would be much more desirable than an annual. Where the supply must come from other than cultivated sources, the most desirable type of plant would be a tree of which the leaves and smaller limbs could be used.

If the material must come from its natural habitat, for instance the tropics, the labor involved in collecting it and the means and cost of transportation to the seaports would largely determine whether it could be profitably made available in quantities in this country.

A possibility which must be borne in mind in connection with the availability of such material is its domestic cultivation. The practicability of cultivating the plant, granted that it would thrive in this country under cultivation, depends mainly on three things: (1) extent of area suitable for growing it, (2) labor required, (3) margin of profit. The plant would have to be adaptable to a sufficient area to yield commercial quantities of material and adaptable, preferably, to such areas where it would not have to compete with other staple and profitable crops. A great deal of hand labor must not be involved in its cultivation and harvesting because that would make the expense too great to make the venture financially attractive. The size of the crop which could be obtained would also determine the question of profit or loss in the operation.

From the foregoing brief outline it will be seen that the problem of finding a valuable insecticide in the vegetable kingdom does not constitute primarily, as might be supposed at first thought, a question of finding a plant which will kill insects, but one which is not only efficient in that respect but can also be made cheaply available commercially. The mere possession of insecticidal qualities in a plant, no matter to what degree of efficiency, can not be of more than scientific interest if the plant is of such a nature and habit that it can not be made available to agriculturists in sufficient quantities and at a reasonable price. Therein lies the problem. To find a plant which satisfies one of the conditions seems entirely probable; to find one which combines both attributes seems likely to be more difficult.

Bureau of Plant Industry, Department of Agriculture.

Saccharin in Place of Sugar

The use of saccharin in various pharmaceutical preparations in place of sugar is recommended by Repetto in *Rev. farmaceutica* (Chem. Abstracts). It is claimed that it has no bad effect upon the human body, and when taken in large doses is beneficial because it prevents stomach and intestinal fermentation. Glycerin is recommended as the solvent.

SOME FACTS ON INSECT POWDER

Editor, The Pharmaceutical Era:

We are very pleased with the article on the "Cultivation of Insect Powder Plants" which appeared in the March issue of The Pharmaceutical Era (page 61), and present our compliments to the writer who, we think, has made a pretty fair study of the subject.

We would state that very large quantities of insect flowers are brought into this country and ground by domestic grinders, while large quantities of flowers are powdered in Japan and distributed in this country. As large handlers of flowers it may interest you to know that we have come to the conclusion that there is absolutely nothing in it for the American wholesaler and distributor in buying powder ground in Japan, for the reason that flowers exported from Japan can be examined physically and are examined by expert customs agents, and we have never known a single lot out of the several tons we have imported of flowers to be of poor quality, but we know that all of the poor quality flowers, either damaged by exposure to moisture or by careless handling, are retained in Japan and are ground into powder.

A physical examination of shipments of powder will tell nothing of such conditions. A chemical examination will tell the story in the non-volatile ether content and insoluble ash or foreign matter sometimes put in with intent. Sieving also shows that a material percentage of flowers are not reduced to a powder. This is a distinct detriment to the customer. There is no advantage to the American distributor in buying powder. If he could get as good powder from the direct importation of powder, well and good; but this is certainly not the case in a very large percentage of the lots exported from Japan. In addition to this, 10 per cent. of the stems can be added to the powder in Japan and it will be impossible to differentiate or state with certainty that more stems than would be normal to the flowers had been actually added. The importation of flowers unground as against powder ground in Japan should be favored.

Baltimore, March 26, 1918. B. A. McCormick

Pharmacognosy of Aloes

(Continued from page 120)

fixed oil and examined microscopically it shows numerous yellow angular fragments. Nitric acid dissolves it forming at first a reddish-brown solution which changes to purplish-brown and finally becomes green. The hepatic varieties are those which are darker in color and obtained by slowly evaporating the juice or allowing a partial fermentation to take place.

Zanzibar aloes is a hepatic (liver-colored) variety of Socotrine aloes. It is dark-brown in color and has an opaque waxy fracture. Its powder is reddish-yellow and when treated with nitric acid forms a yellowish-brown solution.

Barbadoes aloes, from the Dutch West Indies, the hepatic variety of Curacao aloes, occurs in deep chocolate brown, opaque, brittle masses. In powdered form it appears yellowish. The powder like that of Curacao aloes forms a deep-red solution with nitric acid.

Uganda or Crown aloes is the liver-colored variety of Cape aloes. It comes into the market in the form of reddish-brown masses which are more or less opaque. The powder is yellowish-brown solution with nitric acid.

The Value of Association Work

The object of State pharmaceutical associations has frequently been stated in the past, but not all pharmacists have been made to see or understand the advantages to be derived from joining and taking an active part in the work of such organizations. In the face of the perturbed conditions of the present, however, the necessity for individual participation in the work that these associations represent is becoming more imperative. The recognition of co-operative and co-ordinated effort is seen in the endeavor that all professions and trades are making to combine and unify their forces to meet the needs of the future. That pharmacists should catch the step in this forward march and world-wide movement, and do what the members of other callings are doing to promote their collective interests and beneficial co-operation, is the predominating thought in the opinions of all leaders in pharmacy. The following symposium of the views of a number of presidents of the State associations conclusively establishes the importance of these organizations and supplies positive reasons why pharmacists should join their State and National pharmaceutical associations.

NIELS MIKKELSEN, Kenesaw, Neb.

President, Nebraska Pharmaceutical Association.

I realize the great importance of association work. We have learned this, that there are many objects, of great value to man, which can not be attained by unconnected individuals but must be attained, if attained at all, by associated and organized efforts. This applies to us socially, politically as well as scientifically and professionally.

Niels Mikkelsen

The Nebraska State Pharmaceutical Association was organized thirty-seven years ago, and its influence has been greater than was expected. The association made it possible through its membership to enact legislation which has regulated the practice of pharmacy in Nebraska for thirty-one years. The people of Nebraska gained as much by this as the profession.

Without our state associations pharmacy would have been in a bad way in every state in the union, and the people would then have been at the mercy of men without the proper training and qualifications. Our state associations in conjunction with our best schools and colleges have raised the standard of pharmacy higher until it will soon be one of the recognized professions in America. Without associations we could not have done this at all.

I am not forgetting the American Pharmaceutical Association, for I consider this the parent of all our State associations and without it, pharmacy in America would have been at a very low ebb. I claim that it is the duty of every registered pharmacist throughout the United States to join the National, state and county associations if he values his or her professional standing. Think of it, if all the registered pharmacists and others connected with drug stores in America joined, there would be nearly 250,000 united for one purpose. What a force this would be during the congressional sessions at Washington! Would we be recognized in the Army and Navy? Yes, we would be recognized besides having commissioned officers from Colonel down. The labor unions have done things just because they have an enormous membership, which means many votes. They now have one of their members in the President's cabinet. The medical and pharmaceutical professions, if combined, would also do things, but they lack the large membership, which is essential to success.

Too many of our druggists stay home from the annual state meetings, claiming that there is nothing done, and their time is too valuable at home. This spirit prevails out here in Nebraska, and no doubt it prevails in other states. To me, it savors a little of both ignorance and selfishness, for these same druggists enjoy and partake of the fruits gained by the labor of the associations in making pharmacy worth while. In Nebraska only one-third of the druggists belong to the state association, yet the other two-thirds who are not members demand and derive the same benefits. This we can not remedy, though it does go against the grain of those who are active association workers to have the other fellows, who are in reality nothing but slackers and parasites, to sponge on our work.

I have no statistics nor figures to show just exactly the number of people engaged in the drug business in the United States, but when we figure the salesmen in with those men and women actually engaged in drug work, it will not be far from 250,000, out of which there ought at least to be one-half who should belong to our national, state and county organizations.

Socially, as well as individually, co-operation and organization are essential to the growth and success of the pharmaceutical profession, and without it, there can be no growth in the future. We need to stand united. By joining our associations, we recognize our profession, and in turn we recognize ourselves. We should be members of our associations for the good of ourselves and the country we live in, for in union there is strength.

ADOLPH F. MARQUIER, Newark, N. J.

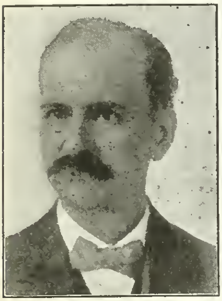
President, New Jersey Pharmaceutical Association.

My first duty is to thank the Era for the interest and consideration it is giving to retail pharmacy. Much has been said about the benefits one receives from association work. Let me say from my experience I would recommend that all pharmacists engaged in retail pharmacy be compelled to attend, if this were possible, at least one session of an annual meeting of a State association.

My recommendation is rather a strong one but it is possible under normal conditions. My friends will now say, "let him tell us what we will gain by this sacrifice," because to the average pharmacist a day spent in the interest of the calling is a sacrifice. They would gain not only knowledge, but the right kind of enthusiasm, which is essential in all successful business. Every State has three or four able leaders who are always ready to impart their knowledge and to sacrifice their time and money to uplift pharmacy and to protect it from promiscuous legislation. These vital points rarely enter the thought of the man who will say, "I do not need any affiliation with these pharmaceutical bodies." This country of ours is going right ahead, even in pharmacy, with shorter hours and better returns for our labors. It seems to me that the man who does not help to support a State or National pharmaceutical association is also forgetting to buy a Liberty Bond.

J. T. JOHNSON, Fergus Falls, Minn.

President, Minnesota Pharmaceutical Association.



J. T. Johnson

The task of securing members for any State pharmaceutical association seems to be a difficult one and yet it ought not to be so. Any one with intelligence enough to become a registered pharmacist ought to see at a glance the benefits of membership in such an organization. First, membership enables the pharmacist to mix and come in contact with the very best element in his chosen profession in his State, a privilege of no small value.

The many problems both scientific and commercial, discussed and threshed out in the annual meetings by men eminent in their lines cannot fail to be of great value to any one who is inclined to observe and think. Laws affecting pharmacy are sure to be passed in every State and it is up to the State pharmaceutical association to see that no measure inimical to the interests of pharmacy reaches the statute books. A service of ten years in the Minnesota Legislature has thoroughly convinced me that the most effectual, if not the only way of dealing with these matters is by means of organization, and this can be obtained only through a united membership of all concerned. Surely the cost of membership is so infinitesimal, as compared with the benefits to be derived, that it may well be lost sight of.

There seems to be a tendency on the part of entirely too many pharmacists to sit back in their easy chairs and say, "Let George do it." This is neither right or effective in getting results. Every registered pharmacist should be a member of his State association and be at all times one of the many "George's" to do it. No matter how industrious or well equipped your State officers may be, they need the help of a goodly and united membership. No general fights his battles alone. It requires the united efforts of the ranks and file. By all means join your State association and be a "booster."

J. A. BEARD, McComb, Miss.

President, Mississippi Pharmaceutical Association.

Pharmacists are standing in their own light if they are not members of their State associations. It is absolutely essential that the calling be organized to a man. There is no doubt but that it is one of the few classes of business and professional men which is not thoroughly organized, and such a condition places us in a position to be legislated against almost at will.

One of the benefits to be derived from membership in such an organization is that of helping others to carry the burden by doing your share of the work; don't stop at merely being a member, but endeavor to attend the meetings. There you will find pharmacists who rank high as professional and business men and you should meet them on such occasions. You have, no doubt, pet ideas and suggestions which are sure to interest other pharmacists, and these you can exchange with brother members who have good information to offer you in return.

The annual meetings of the association are usually held at a time and place which give the busy man an opportunity to take a few days from his business. These he should take advantage of. The small sum he pays for dues will be repaid many times by the pleasures he will derive attending such meetings. As a rule, pharmacists do not take enough time from their businesses, but those who do attend association meetings are sure to get a much needed rest and to come back with many new and profitable ideas. If you are a member, make your arrangements to attend the annual meeting; if you are not a member, do your duty and join the association at once. Appoint yourself a committee of one to see all of the pharmacists in your town who are not members but eligible, and show them that the association needs them and that they need the association. The individual assistance of every man is needed to do this, and if it is done, the association will be in a position to say that it represents the majority of the pharmacists of the State and that it is backed by the trade when it proposes such laws as are needed or, on the other hand, opposes what it considers inimical legislation. Make your town one in which every pharmacist is a member of his association and let us all work together.

W. H. KNOEPFEL, Scranton, Pa.

President, Pennsylvania State Pharmaceutical Association.

The Pennsylvania Pharmaceutical Association through its Membership Committee is about to launch a special drive for new members. Other State organizations no doubt are doing the same thing. Two questions are pertinent in this connection: Is a State Pharmaceutical Association a necessity and does the present association supply that need?

W. H. Knoepfel

In these serious days, with a world wide experience to turn to, there can be no one who doubts the power of organization. Even Nations cannot stand alone, and in the light of present day experience, we can see that an organization to contain all the nations of the world must come some time.

Pharmacy has progressed by means of associations of druggists. The inspiration for the individual to labor, experiment, give expression to his researches, has come through associations. There are men in all walks of life with extraordinary abilities, thinkers, who can foreshadow events. We have such men in pharmacy and they are members of the State Associations. Teachers of pharmacy and chemistry, pharmacists from cities and from hamlets, physicians and hospital assistants, travelling salesmen, wholesale and retail druggists, editors and publishers of pharmaceutical journals, all these together compose the membership of state associations. It can readily be seen that any problem which may arise will be viewed from many angles and the proper solution developed by discussion.

The existence of the State Associations can be justified by a history of achievements. It is only necessary to refer to the benefit each druggist derives from the work of the legislative committee. Much obnoxious legislation has been uncovered and defeated preventing annoyance to the druggist and saving him expense. An investigation of the personnel of any State Association is enough to convince any one that it is an honor to be a member.

The annual meetings are, to those who attend regularly, a post graduate course, a vacation, and a family reunion, all in one. Not all who belong can attend, but there is strength in numbers and the druggist who cannot or thinks he cannot attend the meetings, should nevertheless endorse the work and encourage the men who are laboring in his interest, by affiliating with his State Association and promptly paying his dues each year. A perusal of the copy of the proceedings, which each member receives, will inform him as to what has been done.

RICHARD A. AUSTIN, Cairo, N. Y.

President, New York State Pharmaceutical Association

Richard A. Austin.

The clash of nations, the turmoil of war, the great world cataclysm has made us all stop to take stock of ourselves, and to consider that "No man liveth unto himself and no man dieth unto himself;" that to live selfishly is a crime against society, as well as a crime against God. The world war is teaching us the interdependence of man with man, the necessity of sacrificing something of our own ease and comfort for the general good; it has shown us that work is synonymous with duty, that united effort must take the place of individual enterprise, and that cooperation and co-ordinated endeavor are necessary to bring about the successful accomplishment of any task worth while. The government which forbade agreements between the railroad companies has awakened to the realization of the fact that individualism was suicidal to effectiveness and its first move after having assumed control was in effect, the consolidation or association of rail activities. The Liberty motor which was pronounced a success beyond what was even hoped for it was a direct result of associated ideas, the work of an association of engineers.

Examples of the power of association could be multiplied. The point we wish to emphasize is that individualism is not only supremely selfish but it is a stupendous blunder. Nowhere is this principle better illustrated than in the state pharmaceutical associations. We cannot imagine one more selfish than the pharmacist who does not identify himself with his State organization, for there is scarcely a single favorable statute that is not due to efforts of the pharmaceutical associations of the states, while the number of bills inimical to the interest of the pharmacist which have been defeated through the same agency can be counted by the score.

There is one thing every druggist can do and which requires very little effort. He can join his State association and the small sum he contributes in fees and dues will multiply the power and usefulness of this organization which co-ordinates its energies with the fees and dues of others in the trade, becoming thereby, a great dynamic force, lifting, pulling, driving, compelling, irresistible, not only helping all in the profession, but safeguarding the interests of all the people by sane legislation. Such membership will give you a just pride in yourself and your business, and will enable you to achieve the goal of success.

I. A. SOLOMONS, Jr., Savannah, Ga.

President, Georgia Pharmaceutical Association.

> "It ain't the guns nor armaments nor funds that they can pay,
> But the close co-operation that makes them win the day.
> It ain't the individual nor the army as a whole
> But the everlasting teamwork of every bloomin' soul."

Co-ordination is the predominating spirit in the world to-day. We see it in the labor organizations, we see it in the combinations of capital, and we see it at present well exemplified in our national government. For many years our legislators have fought combinations of any and every sort but when the crisis comes and the emergency of the occasion demands immediate and satisfactory results, they then turn to co-ordination and combination for they see that these methods are absolutely essential for the best results.

As in everything else, so in pharmacy. Never in the history of our profession has there been such a crying need for effective organization. Amidst the turmoil of war, with constantly changing trade conditions and with constantly increasing laws and regulations, some steps must be taken for the advancement, and protection of pharmacy and the pharmacist. These steps cannot be taken by the individual as such but only when his efforts are aided by these of his fellow workers. And it is here that the drug associations are of inestimable value. These organizations and these alone can carry on this work and protect us. And for these organizations to be as effective as they should, a large and enthusiastic membership is essential.

Those of you who are not members of your state association, join at once. When your association meets this spring, lay aside your work for two or three days. Learn what the faithful few are doing and learn how very much more could be accomplished if all would lend a helping hand.

You will be well repaid for the time that you lose from your business. By associating only for a few days with your fellow workers you will go away with ideas that will be most helpful to you in the every day conduct of your business, you will go away feeling bigger and broader for having mingled and worked with men who are laboring constantly for the uplift and advancement of our profession.

WHITNEY DRUG BILL PASSED

The New York State Assembly has passed the Whitney narcotic bill, appropriating the sum of $27,400 to establish a State Department of Narcotic Drug Control, with a view to regulating the sale, prescribing and distribution of cocaine, opium and their derivatives.

The law calls for a commissioner at the head of the department at a salary of $4,000, three deputies at $3,500 each and a secretary at $2,000. The measure is the result of the investigation by a legislative committee headed by Senator Whitney and has already passed the senate.

Charles Gale Shedd, of Keene, N. H., a prominent druggist, has volunteered his services to the American Red Cross and has sailed from New York. He has twin sons already in the service. He will be in charge of a supply depot somewhere between Paris and the trenches. Mr. Shedd has served as president of the New Hampshire Pharmaceutical Association. Five of Mr. Shedd's clerks have also entered the service of their country to fight for the cause of Liberty.

Some Possibilities of Para-dichlorbenzene

By **W. A. KONANTZ,**
Research Chemist, College of Pharmacy, University of Iowa.

IN the chlorination of benzene at ordinary temperatures, about 85-90 per cent of monochlorbenzene and 10-15 per cent. of dichlorbenzene, chiefly para, are produced. At the present time, enormous quantities of benzene are being chlorinated, for it has been found that picric acid can be made more cheaply from monochlorbenzene than from phenol. At the same time, however, large quantities of dichlorbenzene are accumulating for which there is very little demand. For the complete success of this most valuable process of manufacturing picric acid, it is necessary that uses be found for the dichlorbenzene. Owing to the firmness with which the chlorine atoms are attached to the benzene nucleus, p-dichlorbenzene does not enter readily into chemical reaction, and all attempts to convert it into other commercially valuable compounds have so far been unsuccessful. The physical properties of this substance are such, however, that the writer believes it may prove of considerable value in pharmacy. Some possible pharmaceutical uses which have occurred to the writer are here described, in the hope that pharmacists and manufacturers will try them out and so help to solve the problem of utilizing this by-product.

From the viewpoint of the pharmacist, the most valuable property of p-dichlorbenzene, and the one upon which most of its pharmaceutical uses will undoubtedly be based, is its powerful destructive action on certain lower forms of life. Galewsky, who studied the relative efficiency of many substances as moth exterminators, reported (*Z. Textil, Ind.*, 1915, 506) that p-dichlorbenzene is the most effective agent for this purpose, being superior to naphthalene, which is generally used. Many tons of p-dichlorbenzene could, undoubtedly, be disposed of annually in the form of moth-balls, moth powders, moth-solutions, moth-paper, etc., if it were properly pushed. In physical properties p-dichlorbenzene resembles naphthalene very closely. It occurs as transparent, colorless flakes, somewhat unctuous to the touch, and of a faint, rather agreeable, camphor-like odor. It melts at 53°C. and boils at 172°C., the corresponding constants for naphthalene being 79°C. and 218°C.; it is, therefore, more volatile than the latter.

Besides its greater efficiency as a moth exterminator, p-dichlorbenzene has the added advantage over naphthalene that the odor can be more readily removed from garments with which it has been packed. Strips of cloth saturated with a concentrated solution of p-dichlorbenzene in gasoline and dried, lost the odor completely after several hours of airing in the sun. The writer further finds that p-dichlorbenzene can be easily compressed into tablets with an ordinary tablet machine, and that it can also be readily formed into balls by melting and pouring it into molds. On the whole, p-dichlorbenzene seems excellently adapted for use as a moth-repellant, and as it can probably be bought for less than naphthalene it deserves to supplant the latter for this purpose. The writer earnestly recommends that pharmacists and manufacturers introduce and push it as a moth exterminator.

The effect of p-dichlorbenzene on moths suggests that it may also be of value in exterminating or repelling other pests. Dissolved in benzine or any other suitable solvent and applied as a spray to the joints of woodwork, to clothing which has been attacked, and to other articles, it may prove effective against various insects, bedbugs, roaches, ants, flies, etc., and their eggs or larvae. On account of the inflammability of benzine, it may well be replaced by carbon tetrachloride as a solvent, as the dichlorbenzene is very soluble in this liquid, as it also is in alcohol, ether, chloroform and benzene. Solutions of p-dichlorbenzene may also prove useful against vermin on animals and birds, and as a spray for plants.

It is also possible that the insecticidal and antiseptic properties of p-dichlorbenzene may render it applicable in the treatment of certain skin diseases. The writer finds that it is very soluble in petrolatum, lard and many fixed and volatile oils, and large quantities of it can be easily incorporated by simply stirring it into the melted base.

Many other uses for p-dichlorbenzene than those which have here been briefly mentioned may suggest themselves to those who will give the subject a little thought and carry out a new experiments. The attention of pharmacists and manufacturers has been called to this problem because it is nationally as well as commercially important that it be solved as soon as possible. It is hoped that those who work on the problem will publish their results, even though they may be negative, in order that the greatest possible good may come of their efforts. The writer will be glad to give such assistance as he can to any one who is interested.

PARIS GREEN PRODUCTION LIMITED

More than 400,000 pounds of paris green has been manufactured by the Imperial Chemical Company, of Grand Rapids, Mich., this year, the entire 1918 output, and the force is working night and day to turn out additional orders which have been accepted. For the last seven weeks, however, the company has been turning down orders in amounts of 1,000 pounds a day, owing to the scarcity of acetic acid and arsenic, which have been taken over by the government, and divided between insecticide manufacturers and munitions makers. This places the manufacturer of paris green in a tight position, as neither of these articles can be obtained by the individual manufacturer who is not working on government contracts.

As soon as the manufacturing season is over, plans are to be pushed for the enlargement of the Imperial Chemical Company plant. When completed the plant will have a capacity of from 3,000,000 to 4,000,000 pounds of paris green each year.

Solubility of Pharmaceutical Glassware

By VIRGIL COBLENTZ

Up to within a few years ago it was quite customary for analysts, in accurate gravimetric determinations, to make corrections,. allowing for the solvent action of hot alkaline solutions on the glass of the vessels employed whereby foreign silicious matter was carried down with the precipitates. With the introduction of glassware of special composition more or less resistive to the erosive action of liquids, such corrections soon became rarely necessary. This being the general condition relative to one kind of chemical glassware what may be expected of ordinary pharmaceutical bottle and ampoule glass made of a cheaper composition best suited for quick working? Great progress has been made during the past two years in the preparation of special chemical ware, for example, the market is supplied with one kind of glass containing 80% of silica which withstands very sudden and high temperature changes without cracking, yet it is too soft for many quantitative chemical operations; another composition, while very hard and resistive to all kinds of solutions yet will not withstand high temperature changes. The composition of glass in general may be represented by the following general formula, $Me_2O.CaO.6SiO_2$ (Me=Na or K). The sodium silicate glasses with low lime content, such as bottle or window glass, made by fusing sand, soda ash and lime are soft and plastic while fused. Bohemian glass, a potassium silicate with high lime content, withstands a very high temperature before softening and is hard and resistive towards solutions. A glass very resistive against erosion, consists of CaO, 1p., K_2O, 1.1p., and $SiO_2$7p. If the lime be replaced by lead oxide, the soft readily fusible and highly refractive 'crown' or optical glass is obtained. Through the use of other alkaline earths, metallic oxides or anhydrides, a variety of glasses have been obtained suitable for most any kind of work demanded by the chemist, physicist or optician. Since it is not the purpose of this short paper to detail the composition of various kinds of chemical glassware, it will suffice for illustration, to cite a few examples showing the influence of certain basic substances on the physical properties of glass.

Barium oxide increases the index of refraction, brilliance and elasticity. Chemically it is less resistant than lime glass and fuses more readily, being specially useful for pressed ware. Zinc oxide gives a less refractive glass than either lead or barium. It has a high resistance to tension, compression and chemic action. This glass is chiefly employed for physical purposes, Jena thermometer glass contains about 7% of ZnO. Boric acid, up to 20% raises the refractive index, over this it is reversed. This glass resists sudden temperature changes, the action of acids but not alkalies. Boric acid facilitates fusion so that the alkali content of a glass may be reduced along with that of silica. A mixture of zinc oxide and barium oxide is used in Jena resistive and Fiolax glass.

Alumina toughens and makes glass resistive to the action of alkalis. The most alkali-resistive glass is an alkali-alumina-lime-silicate. Jena boro-silicate thermometer glass contains about 5% of Al_2O_3.

Since solutions of a great variety of chemicals are dispensed and stored in common glass bottles and ampoules, the question of the solubility of glass in water or saline solutions is one of importance. If appreciable quantities of alkali are taken up from glass containers by water on standing, then dilute solutions of some heavy metals or alkaloids or certain other chemicals will undergo precipitation or decomposition accordingly. Precipitation is liable to take place in dilute solutions of the salts of copper, mercury, antimony, silver, morphine (1%), narcotine (1%) and strychnine (0.5%). Solutions of tannin darken, spirit of nitrous ether and solutions of hydrogen peroxide undergo decomposition. Blue glass bottles, which give up more alkali to water. than any other kind of glass, cause decomposition of hydrogen peroxide to take place quite rapidly. Normal salt solution as well as solutions of alkaline reaction, erode glass; in the latter instance considerable of a gelatinous precipitate separates. In view of this, in selecting bottles or ampoules for reactive chemicals, care should be exercised in selecting a glass composition as resistive to solvent action as possible. Also, such containers should be thoroughly rinsed with a hot solution of diluted sulfuric acid followed by distilled water. When new, glass gives up a relatively large amount of soluble matter (alkali and soluble silicate) to water which gradually decreases in the course of the washings to a minimum. At first the alkali is dissolved from the surface of the glass and this solution serves as a solvent for the silica. Prolonged washing leaves on the surface of the glass a thin layer rich in silica and lime and poor in alkali which serves to protect the inner layers from further action. Various methods have been proposed for the determination of the solubility of glass in water, all of which give results of relative value only.

a. Boiling for a definite period of time with distilled water and determining the weight of the soluble matter.

b. Boil with distilled water, diluted alkalis or acids for a definite period of time and note the loss in weight of the glass.

c. Digestion with distilled water and determination of alkali dissolved by means of N/100 or N/1000 acid with iodeosine as indicator.

In order that results may be of value it is necessary that all conditions of the experiment are closely observed when applied to each sample. The results should be compared as obtained from various kinds of samples since no definite limits can be set even for any one kind of glass on the market.

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* Read before the N. J. Ph. A., 1917.

Of the various methods proposed, that of Lenz[*] was preferred, the results being based on the weight of alkali dissolved per unit area of surface. The values obtained admit of more satisfactory comparisons. This method consists in filling a well rinsed vial or ampoule with distilled water. This is placed on a bath of boiling water and heated for twenty-four hours, making up any losses through evaporation by further additions. The alkali (NaOH) taken up by the water, is determined by titration with N/100 HCl V.S. with iodeosine as indicator. The superficial area of the inside of the bottle is calculated to square decimeters and the alkali to milligrams, expressed as a whole number. The results are given in milligrams per square decimeter of surface. The number of mils of N/100 acid V.S. required to neutralize the volume of distilled water employed in each experiment is deducted from the total.

For the bottom area of the bottle, when round, multiply the square of its radius (r) expressed in millimeters, by the Greek letter "pie" (3.1416) or in formula r^2 x pie=superficial area.

The surface of the sides is the product of the circumference (C) and height to shoulder (H) or in formula CxH=surface of sides. For the surface of the shoulder, (since H is less than r) we accept 2 (pie x r_2), that is the bottom surface doubled. In oval vials the bottom area would be a x b x pie (a=½ of greater ellipse, b=½ of less ellipse). The shoulder would be 2 (a x b x pie). The side surface is calculated as in the preceding example. A round bottle has a bottom diameter of 70mm., its radius would then be 35 mm. Its height (H) is 140 mm. and circumference (C) 250 mm. Then applying the formulae:

Bottom area=r^2 x pie or 1225 x 3.1416=	3846.5	sq. mm
Side surface=C x H or 140 x 250=	35000.0	" "
Shoulder=2(r^2 x pie) or 2(1225 x 3.1416)=	7693.0	" "
	46539.5	" "
	or 4.6539	sq. dcm

After filling with distilled water and heating for 24 hours, 8.5 mils of N/100 HCl V.S were required for neutralization. This is equivalent to 8.5 x 0.0004 (NaOH)=0.0034 gm (or 3.4mgm) of NaOH which would be equivalent to 0.70 mgm. NaOH to each square decimeter of surface of the vial.

The following table presents the results obtained from samples of various kinds of glass bottles and ampoules of different manufacturers and serves to show that great variations exist, not only among containers of the same kind of glass but of different sizes. Ampoules, with the exception of two kinds, make an excellent showing, which however might not be so good, were Jena resistive glass ones available for comparison. No definite limits of soluble alkali can, under the present conditions, be suggested; manufacturers and retailers must be contented with what is available. With ampoules, the case is different, these can be readily blown from resistive glass tubing which is available. Since these are very frequently employed for holding solutions of sensitive chemicals as well as sodium chloride and liquids of alkaline reaction, there is every reason that care should be exercised in the selection of a suitable glass.

Loss by solubility expressed in milligrammes per square decimeter:

Green Glass	2 gal. packer	9.3
	1 lb. packer	1.0
	100 mils bottles	1.0 to 1.4
Amber Glass	1 lb. packers	1.7 to 1.4
	5 lb. packer	3.6
	100 mils bottles	2.3-1.7 to 1.0
	120 mils bottles	0.6 to 0.75
	same after washing with H_2SO_4	0.4
	4 oz. square	1.2-0.6-1.3-1.5-0.7 to 0.6
	same after washing	0.3-0.7-.03 to 0.8
	400 mils	5.0
Blue Glass	1 lb. packer	7.0
	100 mils	2.0
	125 mils	15.0
Flint Glass	1 lb. packer	2.0
	8 oz. square shoulder	1.5
	8 oz. round	0.6
	4 oz. round	0.6
	4 oz. rectangular	1.5
	400 mils	0.9
	100 mils	2.9-2.3 to 1.0
Ampoules	90 mils	0.2
	60 mils	0.3
	75 mils	0.23
	70 mils	1.7
	80 mils	0.36
	10 mils amber	1.1
	10 mils a resistive glass tubing	0.25
	10 mils a resistive glass tubing	0.43

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[*] International Congress XI Haag.

OKLAHOMA STATE PHARMACEUTICAL ASS'N HOLDS SUCCESSFUL CONVENTION

The Oklahoma Pharmaceutical Association held its eleventh annual convention at Oklahoma City on April 8, 9 and 10. Druggists from all parts of the state were in attendance, and members of the state pharmaceutical travellers' association also were present. The two organizations held a joint convention.

Talks by Governor Williams, Sam W. Stone, president of the State Board of Pharmacy, Floyd Mincy of the travellers' association and Frank Stockdale and a report by W. R. Jarrett, secretary of the state board were on the programme for the first day's sessions.

On the second day talks were made by Dr. J. W. Drake, president of the State Board of Health, Mr. Stockdale and W. T. Coffe, and a report on the American Pharmaceutical Association was made by H. S. Brown, dean of the school of pharmacy of the University of Oklahoma. W. H. Cousins of Dallas, Tex., president of the N. A. R. D. was one of the speakers, on the morning of the second day. Fred Coleman of Oklahoma City, president of the Oklahoma Pharmaceutical Travellers' Association presided at this session and made an address.

A feature of the convention was the reading of papers on subjects of vital interest to drug men, for which cash prizes were offered. These papers dealt with "Prices in Retail Drug Stores," and "Recent Laws Affecting the Drug Business."

At the final session of the joint convention the following officers were elected:

Pharmaceutical association, president, Thomas Roche, Oklahoma City; first vice president, Lee Drummond, Dewar; second vice president, W. J. Roersia, Oklahoma City; secretary, F. B. Lillie, Guthrie.

Pharmaceutical Traveller's association, president, W. L. Peck, Enid; first vice president, Walter Smith, Durant; second vice president, C. A. Blair, Oklahoma City, secretary, Floyd Mincy, Oklahoma City.

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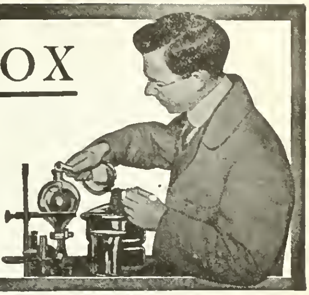

Therapy of Some German Latin Drugs.

(A. M.)—All the substances you name are so-called "crude drugs," most of them being designated by German Latin titles. As we interpret the list, the names and the general therapeutic properties of the drugs are as follows:

Agaricus albus, white agaric; official in the N. F.; the dried fruit body of the fungus growing on one or more species of Pinus, deprived of its outer rind; classed as an antihydrotic and used in the treatment of night sweats of phthisis, etc.

Aloe Sucotrino, Socotrine aloes; described in U. S. P.; tonic, laxative purgative.

Dictamnus creticus, Cretan dittany; the whole plant of *Origanum Dictamnus* found growing in Crete; contains a volatile oil similar to other species of Origanum; used in fomentations for scrofula, etc.

Rhabarbarum, rhubarb, U. S. P.; the root of *Rheum officinalis;* aperient, purgative, astringent, stomachic, tonic, etc.

Zedoaria, Zedoary; described in the N. F. as the dried rhizome of *Curcuma Zedoaria;* stomachic and aromatic like ginger; used as a stomachic etc., as in the treatment of dyspepsia.

Camomilla Romano, Roman chamomile; formerly recognized by the U. S. P. and still official in several European pharmacopoeias, the B. P. defining the drug as the unexpanded flower-heads of *Anthemis nobilis;* antispasmodic, diaphoretic, stimulant, tonic, etc.

Galanga Centurea; we are unable to locate this particular botanical variety in any of the numerous reference works at our command, but presumably it is similar if not identical with common galangal root, the dried rhizomes of *Alpinia officinarum,* described in the N. F. It is known in some quarters under the common names of "colic root," "ginger root," etc., and possesses aromatic and stomachic properties.

What is Caramel?

(E. de F.)—Caramel is defined by the National Formulary as a concentrated aqueous solution of the product obtained by heating sugar or glucose until the sweet taste is destroyed and a uniform dark mass results, a small amount of alkali or alkali carbonate being added while heating. It contains several complex coloring substances, an ordorous principle, some undecomposed sugar and a white hygroscopic substance known as caramelan. It is used for coloring syrups, solutions, elixirs, liquors, etc. The N. F. also gives a formula for tincture of caramel, but commercially, sugar coloring is made in different grades or depths of tint, which are also differently soluble, the one in 75 per cent. alcohol and the other in 80 per cent. alcohol. According to Sadtler ("Industrial Organic Chemistry"), for beer or wine coloring "it is not necessary to be so careful to use a sugar freed perfectly from dextrine, nor is the treatment with alkali necessary. Simple caramelizing by heat will suffice to produce the necessary color."

Quince Seed Toilet Cosmetics.

(J. F. McC.)—Just what should be the form of the "toilet cosmetic" you wish you do not state. However, here are several formulas for preparations used as cosmetics in the manufacture of which quince seed is employed:

(1)

Quince seed	1½ drams
Boric seed	½ dram
Salicylic acid	20 grains
Glycerin	1½ ounces
Eau de cologne	4 ounces
Water	4 ounces

Make a mucilage with the quince seed before adding the other ingredients.

(2)

Quince seed	3 drams
Glycerite starch	4 ounces
Boric acid	8 grains
Glycerin	4 ounces
Rectified spirit	6 ounces
Carbolic acid	20 grains
Oil of lavender	40 mininims
Water, enough to make	32 ounces

(3)

Quince seeds	2 ounces
Boric acid	32 grains
Starch	2 ounces
Carbolic acid	80 minims
Glycerin	17 ounces
Rectified spirit	24 ounces
Oil of lavender	80 minims
Otto of rose	20 minims
Essence of white rose	2 ounces
Tincture of benzoin	148 ounces
Water, enough to make	148 ounces

Dissolve the boric acid in some water, make a mucilage with the quince seeds, straining, without pressure. Prepare the glycerin and starch as you would make glycerite of starch, and when cold add the carbolic acid and the quince mucilage. Mix the perfumes and the tincture of benzoin in the alcohol, add to the mixture of starch and quince mucilage, and strain if required.

A liquid cosmetic in which tragacanth is employed is the following:

Spirit of bergamot	1. fl. dram
Spirit of lavender	1 fl. dram
Boric acid	40 grains
Water	6½ fl ounces
Alcohol	½ fl. ounce
Glycerin	1 fl. ounce
Tragacanth	25 grains

Macerate the tragacanth in the water for 24 hours, stirring often; strain, add the boric acid dissolved in the glycerin and the alcohol with the perfume. Mix.

Fur Dyeing

(C. C. P.)—The dyeing of fur belongs to the dye expert rather than to the pharmaceutical chemist, and the best we can do is to give you a formula or two from technical authorities which are said to do the work, but for the success of which we cannot vouch, as we have had no practical experience in this line of dyeing:

Black cold dye for goat skins; rub into the hair with a brush, a solution of ½ ounce silver nitrate in 1 pint of soft water, and hang the skin in the sun to dry. Afterward apply, in the same way, a solution of 1 ounce of potassium sulphate in 1 pint of water. Dry in the sun; afterward rub off and dry in the shade; work occasionally while drying. To intensify, apply a solution of pyrogallic acid before rinsing.

Another process from a German technical journal is the following:

The fur to be dyed is first treated with a solution of sodium hyposulphite of 20° B., warmed to 25° C., and then with a solution of potassium bichromate, to which 2 to 5 grams of acid have been added, also warmed to 25°. The hair is thus dyed yellow. It is then washed and placed in a bath of some readily oxidizable substance, such as p-phenylenediamine, p-amidophenol, pyrogallol, etc. At a temperature of 90° C., the dyeing is soon completed. With 5 to 10 grams of p-phenylene-diamine per liter a deep black color is obtained, with the two other above mentioned a brown color. Another consists in treating the fur (or hair) with a solution of an ammonium double salt of some heavy metal in water and then exposing it to the action of a suitable mordant. The most suitable salt-bath is an aqueous solution of nickel ammonium nitrate.

Of course, some experimenting is probably necessary to produce the best results, but we are creditably informed that for dyeing small pieces the first formula produces a very permanent black, and the process is usually very easily managed by the amateur.

Detannated Fluidextract of Cinchona.

(B. M. & Co.)—We cannot give a specific formula for standard preparations under the above title, but cinchona may be deprived of its tannin by the use of freshly prepared ferric hydroxide or other substances which will combine with the astringent principles of the bark and form precipitates that may be removed by filtration. While neither of the last editions of the Pharmacopoeia or the National Formulary gives a formula for a preparation of this type, the N. F. III and previous editions of the same carried a process for making detannated tincture of cinchona, which in alkaloidal strength was practically identical with the official pharmacopoeial tincture of cinchona. This preparation was introduced for the manufacture of elixirs containing cinchona and iron salts, but later was dropped and the formula replaced by an elixir of cinchona made directly from the cinchona alkaloids, the statement being made that this elixir was the practical equivalent of the older preparation, with the advantage of giving no reaction with salts of iron. We give the N. F. III formula for detannated tincture of cinchona, which may be used with the necessary adjustments, as a type for the preparation of a detannated fluidextract:

Fluidextract of cinchona........	6 fl. ounces
Alcohol	16 fl. ounces
Solution of ferric sulphate.....	12 fl. ounces
Ammonia water..............	12 fl. ounces
Water, Diluted alcohol, of each a sufficient quantity to make....	32 fl. ounces

To the ammonia water diluted with 48 fl. ounces of water, gradually add the solution of ferric sulphate, previously diluted with 80 fl. ounces of water, with constant stirring. Pour this mixture, containing ferric hydroxide as a precipitate, upon a wet muslin strainer (which has been weighed, after having been wetted and deprived of the excess of water by moderate pressure), and when the liquid has drained off return the precipitate to the vessel, and mix it intimately with about 128 fl. ounces of water. Again drain on the strainer, transfer it once more to the vessel and treat it as before. Finally drain and press the precipitate on the strainer until it weighs 16 troy ounces.

Mix the fluidextract of cinchona with 16 fl. ounces of alcohol, and add the ferric hydroxide previously prepared. Agitate the mixture frequently until the tincture is deprived of tannin, which may be known by the absence of a blackish-green color when a small portion of the clear tincture is treated with a drop or two of tincture of ferric chloride. The mixture is then introduced into a percolator, previously stopped with a plug of absorbent cotton, through which the liquid is allowed to pass. As soon as the liquid has disappeared from the surface add sufficient dilute alcohol to make the product measure 32 fl. ounces. The finished product contains about 49 per cent. of alcohol.

America's Strontium Industry

An American strontium industry is in the process of formation. Several of the older chemical companies are making small quantities of strontium compounds, chiefly the nitrate and two or three plants in the Southern part of California have been established especially for this purpose. These plants do not entirely take care of the present domestic demand which it is estimated amounts to nearly 1,000,000 pounds or 500 tons. This demand is largely due to the war conditions, as the use of signal-lights both on sea and land has been enormously increased. The price of nitrate under normal conditions is about 8 cents per pound but the war prices have fluctuated between 20 and 50 cents with about 35 cents as an average. The price of the carbonated is about 18 cents for the technical grade.

Richard K. Meade in *Mineral Foote-Notes* says: "The principal use of strontium in this country is in the manufacture of fireworks, night-lights and signal shells, in which its whole function lies in the brilliant crimson color which it imparts to the flame. It is probable that the quantity used in fireworks is relatively small but the quantity used in signal-lights which are used by railway and steamship companies is quite appreciable. Since the war began there has been a considerable demand for strontium nitrate to be used in signal shells and it is probable that this, as well as the cessation of importations, has occasioned the increase in the domestic production in the last few years."

The most important purpose for which strontium salts are used abroad has never been developed in this country, namely, the strontia or Scheibler process for the recovery of sugar from beet sugar molasses. Germany at the time of the outbreak of the war was using annually in the sugar industry from 100,000 to 150,000 tons of strontium hydroxide. In Russia, also, where the beet sugar industry is well established, probably as great an amount was used. In Italy, Great Britain and the United States, however, the lime or Steffens process is the one usually employed. It is generally conceded that the strontia process is more efficient than the lime process and that the principal difficulties connected with its establishment in this country have been the cheapness and facility with which lime could be obtained on the one hand, and the expense and difficulty of obtaining strontium hydrate on the other. In the case of lime, too, this is generally discarded after being used, while, to meet the expense, strontia must be recovered.

The Progress of Pharmacy

Production of Zinc Perhydrate—

F. W. Sjostrom concludes that zinc perhydrate is a mixture, rather than a definite chemical compound (*Z. anorg. Chem.*, through *J. Chem. Soc.*). In a study of the composition of this compound, he used the following method for the preparation of zinc perhydrate; The calculated quantity of 30 per cent. hydrogen peroxide was allowed to remain in contact with freshly calcined zinc oxide for a period of several hours at —10° C. The product thus obtained represented a paste-like mass above 2° C. When dried over soda lime, on a porous plate, at 35° to 40° C., the product was obtained in the form of a white powder. In the white powder the quantity of oxygen, water and zinc oxide were determined. Oxygen was found present to the extent of 8.04 per cent., corresponding approximately to the formula $Zn_2O(OH)O.OH$. At ordinary temperatures the white substance was fairly stable when treated with water, alcohol, or ether. Double normal solution of sodium hydroxide decomposed the compound only slowly. The investigation leads to the conclusion that the product is not a simple chemical compound, as when triturated with water, fractions which contain varying amounts of oxygen are obtained. Experiments with this mixture in the same manner, but before drying, yielded three fractions, each containing approximately 12 per cent. of oxygen, but no definite chemical formula could be ascribed. Preparations of a like composition were obtained upon boiling zinc carbonate with an excess of 30 per cent. hydrogen peroxide. Zinc peroxide has been recommended as an antiseptic and bactericide, being used both as a dusting powder and in the form of a 10 per cent. ointment.

Facts about the Loganberry—

The loganberry is a Californian fruit now grown in many parts of the East. It is a cross of the blackberry or dewberry and the raspberry, and is one of a number of hybrids bearing such names as Lowberry, Laxtonberry, Phenomenalberry, etc. The composition of the loganberry, according to a California Experiment Station report (1895), is as follows: Water, 79.26 per cent.; citric acid, 1.52 per cent.; sugar (invert), 7.15 per cent.; protein, 4.55 per cent.; fat, 0.61 per cent.; crude fiber, 1.38 per cent.; ash, 0.57 per cent. It is used in the fresh state and in the form of preserves, while the expressed, unfermented and sterilized juice is coming to be widely sold as a substitute for grape juice as a beverage. (*Am. Jour. Pharm.*)

Citresia—

An acid magnesium citrate recommended in 25 gram doses as a laxative, and as a purgative in doses of 50 grams, dissolved in water. It appears as a white powder having an acid taste.

Formaldehyde for Seed Grain—

Concerning the use of dilute solution of formaldehyde for the treatment of seed grain to prevent the growth of parasitic diseases, J. Earl Taylor in *Bulletin of Pharmacy,* recommends a mixture consisting of 8 fl. ounces of 40 per cent. solution of formaldehyde diluted with enough water to make 40 gallons. This quantity is sufficient to moisten 50 bushels of oats or other grain. After being thoroughly moistened and turned over, the grain is left in a pile for three hours, then spread out to dry. The author states that in one case a yield of 80 bushels per acre of oats was obtained from 80 acres of seed thus treated, the crop showing no traces of smut. Seed from the same bin sown without treatment yielded 65 bushels per acre, and one-fourth of this was affected with smut. The sale of formaldehyde by pharmacists in agricultural districts would seem to offer profitable returns for those who desire to branch out in this line of trade.

Solidified Alcohol—

Solidified alcohol usually consists of some material of 'spongy" structure which is able to hold the alcohol tightly. Considering the efficient manner in which sodium stearate serves in the manufacture of glycerin suppositories where about 93 per cent. of glycerin can be presented in solid form through the use of this agent, it would seem logical to use sodium stearate in the preparation of solidified alcohol. The following formula has given good results: Make two solutions, one consisting of stearic acid, 3 grams, dissolved by the use of heat, in enough methyl alcohol to make 50 mils, the other consisting of 0.5 gram of sodium hydroxide dissolved in sufficient methyl alcohol to make 50 mils. The solutions are mixed while hot and the mixture is poured into cans. The forms of methyl alcohol which are applicable to the above formula are ordinary wood alcohol and Columbian spirits. Grain alcohol and many of the denatured alcohols produce sooty flames and are therefore unsatisfactory for use in this connection(Mulford Co's Laboratory Notes through *Can. Pharm. Jour.*).

Assay of Vanilla—

Estes makes use of the violet coloration resulting when vanillin is heated with a solution of acid mercuric nitrate as the basis for an assay of vanilla. The color produced is in direct proportion to the vanillin present. To carry out the assay, mercury is dissolved in twice its weight of nitric acid (sp. gr. 1.42,) and the resulting solution diluted with twenty-five times its weight of water. Then five mils of an alcoholic tincture are introduced into a 50 mil flask, 6 mils of water are added, followed by the addition of 1.5 mils of the solution of acid mercuric nitrate. The flask is placed in boiling water for about twenty minutes, and then cooled rapidly. Enough water to make the volume to fifty mils are added, when the color produced is compared with that of a solution prepared from a sample of pure vanillin and treated in the same manner. The same procedure is followed with samples of non-alcoholic extract, but only 1 mil of reagent is employed. (*Jour. Ind. Eng. Chem.*)

Halazone, a New Water Sterilizer—

The problem of sterilizing water for troops on the march has exercised the minds of those in authority. The hypochlorite method is useful only when troops are stationary. Chloramine-T requires a high concentration to effect the necessary sterilization, especially with hard alkaline waters, and this renders the water unpalatable. In presence of an acid, such as acetic or citric, a lower concentration is effective, but chloramine-T decomposes when kept in contact with an acid. An effective, stable, and inexpensive agent has been found in p-sulphondichlor-aminobenzoic acid, $Cl_2N.O_2S.C_6H_4.COOH$, one part of which in 300,000 will sterilize highly contaminated water. Tablets containing 4 mg. of this substance, with sodium carbonate and sodium chloride, are used, and to these the name of "halazone" has been given. Halazone tablets have been found to be sufficiently stable for all practical purposes. One tablet is usually sufficient to sterilize a litre of water. (*Pharm. Jour.*)

Disodo-Luargol—

A new soluble form of luargol (arsenobenzol-silver-antimony compound) has been introduced under the name of disodo-luargol, which is described as a definite sodium compound, freely soluble in water, giving a brown solution. The contents of an ampoule may be dissolved in sterile water and injected immediately without the necessity of filtration. Injection is made in the same way as in the case of salvarsan. The dose to commence is 0.05 gm., this being gradually increased until, at the sixth injection, 0.3 gm. is reached. Two injections per week are well tolerated. (*Pharm. Jour.*)

Definition and Standard for Baking Powder—

The definition and standard for baking powder recently adopted by the joint committee on definitions and standards Nov. 18, 1916, having been approved by the Association of American Dairy, Food and Drug Officials and by the Association of Official Agricultural Chemists, has been adopted as a guide for the officials of the Bureau of Chemistry of the U. S. Department of Agriculture. As defined in Food Inspection Decision 174, baking powder is the leavening agent produced by the mixing of an acid reacting material and sodium bicarbonate, with or without starch or flour. It yields not less than 12 per cent. of available carbon dioxide. The acid reacting materials in baking powder are: Tartaric acid or its acid salts, acid salts of phosphoric acid, compounds of aluminum, or any combination in substantial proportions of the foregoing. The announcement of the amount of calcium sulphate which reacts as an acid reacting material; the amount of other salts of phosphoric acid which react, and the limits for arsenic, lead, zinc, and fluorides is reserved pending further investigation. Baking powder materials should be as free from metallic impurities as it is feasible for a manufacturer to make them.

Chamomile Adulterant—

Examinations of importations of "Chamomile flowers," *Matricaria chamomilla* L., have disclosed in some instances that the flowers of dog fennel, *Anthemis Cotula* L., have been substituted in amounts up to 25 per cent. The flowers of *Matricaria chamomilla* have naked, hollow receptacles, whereas those of *Anthemis cotula* are solid and chaffy. The U. S. Department of Agriculture has recommended the detention of shipments labeled "chamomile flowers" found to contain dog fennel or other foreign matter in excess of 5 per cent., the standard established by the U. S. P. IX.

Asiatic Licorice Root—

Examination of material imported as licorice root has disclosed that the product was not obtained from either of the species official in the U. S. Pharmacopoeia, but consisted of Asiatic licorice, *Glycyrrhiza uralensis* Fischer, an unofficial species. Except that the sample examined contained a considerable quantity of stems, it was of a good quality. According to information available in literature, Asiatic licorice contains about the same amount of glycyrhizzinic acid (18 to 20 per cent.) as Spanish and Russian licorice. According to a ruling by the Department of Agriculture, no objection to the importation of this product will be offered if it is labeled "Asiatic licorice root. Not recognized in the U. S. P."

Harlem Oil—

Heretofore the Bureau of Chemistry has been rather inclined to the opinion that Harlem oil had a geographical significance, and could not be considered as generic in its meaning. In the past few years inquiries made of the bureau with regard to the proposed label for an oil manufactured in this country, and identical with the foreign product heretofore known as Harlem oil, have indicated the necessity of considering this term in a broader sense. Following this investigation the bureau now states that there will be no objection to the designation of such an article as Harlem oil, provided the name be modified to indicate the place of production, as, for example, "Harlem Oil, Manufactured in America."

Disinfection with Formaldehyde—

On account of the high cost of permanganate, which is extensively used with solution of formaldehyde to evolve formaldehyde gas for the purposes of disinfection, D. W. Horn proposes the use of bleaching powder as a substitute for permanganate as a reacting agent. He finds that 800 Cc. of formalin poured into 620 grams of bleaching powder will produce the desired quantity of gas to disinfect 1000 cubic feet of space, viz., 75 Cc. of formaldehyde. Comparative costs of the method suggested and the permanganate and dichromate methods for producing formaldehyde gas are given as follows: Permanganate-formalin method, $2.29; dichromate-formalin method, $1.14; bleaching powder-formalin method, 39c. (*Amer. Jour. of Public Health*).

Camphor's Toll of Lives

There are few things which demand a heavier toll of lives than camphor. The reason for this is that the mountainous parts of the island of Formosa, from which the world gets most of its camphor, are inhabited by head-hunting savages whom the successive invaders of the island have been unable to subdue.

These savages are alive to the value of the camphor trees, and fiercely oppose all attempts to get possession of the forests. Their hostility makes the gathering of the camphor a most hazardous occupation, and one in which a loaded rifle is the most indispensable tool.

Since the Japanese took the island after their successful campaign against China in the '90s they have been carrying on a carefully conceived plan of gradual penetration of the valuable camphor regions. They make paths six feet in width through the virgin forests. At intervals of every 120 yards stands a guardhouse, and every fourth or fifth guardhouse is a small fort, intrenched and defended by barbed wire entanglements. Telephonic intercommunication, machine guns and all the resources of western military science are employed, and the lines are pushed gradually forward.

P-W-R CO. PASSES CENTURY MARK

In April of the present year Powers-Weightman-Rosengarten Co., of Philadelphia, completed one hundred years of continuous activity in the chemical industry in America, a record of which they may well feel proud. As a souvenir of the event they have recently issued a little brochure which contains various illustrations, among them being portraits of the founders of the company, views of laboratories at diffent periods during the century; the main laboratories and offices in Philadelphia at the present time, and the New York and St. Louis houses of the company in 1918. Among the many medals which have been awarded to the company at various times during the century, a number of which are illustrated in the brochure, there is none which expresses more accurately the progress of this concern than the Elliott Cresson medal awarded by the Franklin Institute in 1875 to Powers & Weightman "for the introduction of an industry new in the United States and perfection of result obtained in the manufacture of Citric Acid."

New Books for Pharmacists

THE PHYSICAL CHEMISTRY OF PROTEINS. By T. Brailsford Robertson, Ph. D., D. Sc., professor of biochemistry and pharmacology in the University of California. 8 vo., 483 pages, cloth, $5. New York, Longmans, Green & Co.

A previous edition of this work appeared in German six years ago, since which time our knowledge of the physico-chemical behavior of the proteins has considerably expanded and increased in exactitude, but the facts have been scattered widely in medical, biological and chemical literature, no real attempt having been made to correlate them into one volume. This the author endeavors to do in the book before us, and while emphasis is laid primarily upon general principles, he has provided for those interested in the subject a reference work of great value.

In this book the literature relating to the proteins has been brought down to the middle of 1917. Of the most important investigations which have appeared during the past six years, the author mentions, the invention by Van Slyke of an accurate and simple method of determining free amino-groups; the work of Pauli upon the combining capacity of deaminized protins; of Schmidt and of af Ugglas upon compound proteins; of Procter upon the swelling of protein jellies; the work of Reichert and Brown upon the crystallography of haemoglobin, and that of Dabrovsky upon the molecular volume of proteins dissolved in water and in solutions of coagulating salts. Complete summaries of these investigations appear in the text under the various chapter headings.

The author's treatment of the subject falls under four divisions: Part I, or "Chemical Statics in Protein Systems," in which are taken up the chemical constitution, preparation, quantitative estimation, and compounds of the proteins; Part II, "The Electrochemistry of the Proteins," treating of the formation and dissociation of protein salts, the combining capacity of the proteins, the electrical conductivity of solutions of protein salts, and the electrochemistry of coagulation; Part III, "The Physical Properties of Protein Systems," treating of the phenomena which accompany changes in the state of aggregation of proteins, certain physical properties of protein solutions, and optical properties of protein solutions; Part IV, "Chemical Dynamics in Protein Systems;" hydrolysis of the proteins; and enzymatic synthesis of proteins. An appendix on "the technique of electrochemical measurements in protein systems," is followed by an index of authors which also gives references to the bibliographies following the various chapters. The book as a whole is noteworthy and valuable and should interest every worker in biology, medicine, chemistry and related sciences. The extended lists of references cited throughout the volume are evidences of the care that has been taken to correlate the widely separated facts and make them available for the average worker in this field.

THE CHEMISTRY OF COLLOIDS. Part I, Kolloidchemie, by Richard Zsigmondy, professor at the University of Gottingen, director of the Institute of Inorganic Chemistry, translated by Ellwood B. Spear, associate professor of inorganic chemistry, Massachusetts Institute of Technology; Part II, Industrial Colloidal Chemistry, by Ellwood B. Spear, B. A., Ph. D., with a chapter on Colloidal Chemistry and Sanitation, by John Foote Norton, S. B., Ph. D., assistant professor of chemistry of sanitation, Massachusetts Institute of Technology. 8 vo., 283 pages, cloth, $3. New York, John Wiley & Sons, Inc.

As stated above, Part I of this work is a translation of Prof. Zsigmondy's German treatise on Kolloidchemie, the section as a whole covering the general considerations relating to colloids, their classification and properties, inorganic colloids, colloidal non-metals, colloidal salts, organic colloids, the composition and colloidal character of dyestuffs, and the relation of protein bodies to colloidal chemistry. In this section the author explains many of the phenomena connected with the colloidal state of matter, a subject which until recent years has not been well understood. The process of dialysis discovered by Graham in 1861, first brought to the attention of pharmacists the differentiation between crystalloidal and colloidal substances, but his classification of these substances has been considerably modified by investigators during the past fifteen years. In this book Prof. Zsigmondy has endeavored to place our present knowledge of colloids upon a scientific basis, and his treatment of the subject explains many puzzling points concerning the chemical behavior of these bodies which have hitherto been unsettled.

As a reason for the incorporation of the several chapters which constitute Part II of the book, Prof. Spear cites the great importance of the chemistry of the colloidal state of matter to the industries, the subject being considered under the chapter headings; Smoke, Flue Fumes, Liquid Particles in Gases; Rubber; Tanning, Colloidal Graphite; Clays and Soils and Colloids in Sanitation, the last chapter being a contribution from Prof. Norton, who states that it is firmly believed that a more complete study of disinfection from the colloidal standpoint will be productive of results which are not only of theoretical interest but also of a great practical importance.

DIRECTIONS FOR A PRACTICAL COURSE IN CHEMICAL PHYSIOLOGY. By W. Cramer, Ph. D., D. Sc., M. R. C. S., L. R. C. P., 3rd ed., 12 mo. 8+119 pages, limp, $1. London and New York. Longmans, Green & Co.

This little book differs from most of the works on chemical physiology in that the subject matter is practically limited to experiments and deductions therefrom, the student working with material with which he is most familiar, as potato, egg, lard, butter, etc. By the use of these substances he is taught to prepare, by simple chemical manipulation, the proximate constituents and their decomposition products and to study their chemical reactions and physical properties. In following this plan the author claims, the student is introduced to the subject without interposing complex chemical conceptions, which the usual arrangement of dividing the subject into the study of carbohydrates, fats, and proteins necessarily involves.

In Part I the author takes up the consideration of animal and vegetable tissues, as the preparation of starch from potato, and of glucose, alcohol, dextrose and maltose from starch. By experiments with lard and olive oil the student learns of the solubility of fats and their hydrolysis by alkali, while experiments with such substances as the egg, milk, flour, muscle and gland, the liver, nervous tissue and blood, are of a character that lead him to correlate the facts he has observed in his experiments with the theoretical matter taught in the systematic lectures and the text books. Part II outlines experiments covering the general subject of digestion, while in Part III the general facts pertaining to normal metabolism are investigated, as the constituents of normal urine, the quantitative estimation of nitrogen, urea, ammonia, etc., this study being followed by experiments relating to pathological metabolism, as the gastic contents, abnormal constituents of urine, etc. That the author's "Course" is appreciated by teachers and students of laboratory work in chemical physiology is shown in the demand there has been for his book, the third edition of which brings the laboratory treatment of the subject well up to date.

A CONDENSED COMPENDUM OF PHARMACEUTICAL KNOWLEDGE. A Quiz Book. By H. C. Gray, Ph. G. Revised by A. D. Thorburn, Ph. G., associate in pharmacology. Indiana University School of Medicine, etc. 15th edition, 12 mo., 284 pages, cloth. $1.50. Chicago, Ill. M. M. Gray & Co.

Experience tends to show that a broadly educated pharmacist is rarely, if ever, developed from the student who attempts to reach the goal of his calling by restricting his studies to the average "quiz compend." But there can be no doubt that a work of this kind has some value, if the student has had sufficient preliminary instruction in the various subjects relating to pharmacy, as it makes it possible for him to quickly review his studies when he has no opportunity to read text books; and places before him bost of the salient facts he needs to know about, especially if he is an applicant for examination by a board of pharmacy. To this extent the book before us is sure to bring to the attention of busy clerks many important points and useful information, as well as technicalities of the drug business which will prove helpful. The student who would confine his entire course of study to "short methods," however, is very likely to meet with disappointments he can never surmount.

PROCEEDINGS OF THE NATIONAL WHOLESALE DRUGGISTS' ASSOCIATION. Forty-third annual meeting held at Chicago, Ill., October 1 to 4, 1917.

This volume contains a very complete report of the meeting of the N. W. D. A. held at the Congress Hotel, Chicago, last year, as also the full text of the reports of the various committees, and what is likely to be most helpful to all members of the drug trade, a synopsis of the legislative measures and regulations that have been enacted or put in force which particularly apply to the conduct of the drug business. There are rulings on the Harrison narcotic law, the text of the war revenue law, regulations issued by the Internal Revenue Department relating to the sale of spirits, etc., and reports of the committee on credits and collections, on employers' liability and workmen's compensation, etc. There is also the report of the special committee on metric weights and measures, the perusal of which shows that not all of the wholesalers are as yet using this system, though a canvass of the membership reveals a considerable sentiment in favor of it, either on account of its own merits or that the country may get in line with the almost uniform system of handling goods throughout the world.

Another interesting report is that of the special committee on suits against members, which may be said to constitute the closing chapter of the long-pending suit of John D. Park & Sons Co., against certain members of the association, the sum for which settlement was made, including all expenses, being slightly more than $165,000. At the time the proceedings went to press the active members numbered 251, and the associate members 336. Two active members, 19 associate members, and 1 honorary member were elected at the Chicago meeting. The 1918 meeting will be held in New York, beginning Monday, Oct. 7.

A COMPLETE SYSTEM OF NURSING. By A. Millicent Ashdown, certificated King's Hospital and Royal Ophthalmic Hospital, Moorfields, examiner in Nurses' practical work to Guy's Hospital, London, etc. 12 mo., 15+746 pages, cloth, $5. London, J. M. Dent & Sons, Ltd., New York, E. P. Dutton & Co.

This book is rightly named, as it places before the nurse a short account of the different diseases, their prominent symptoms and chief points of distinction, their possible complications, the nursing attention required, and the treatment likely to be given by the physician and surgeon in order that suitable preparation may be made by the nurse for the work in hand. We have examined this book with a great deal of interest and we are convinced from what the authoress says and the manner in which she says it that she is writing from experience and a comprehensive knowledge of the various problems confronting those who assume the duties of nursing.

As she understands them, the qualifications of a good nurse are: a real love of attending to the sick and helpless, a strong constitution, and equable temperament. Only those possessing these qualifications should attempt to train as nurses, as the life is a strenuous one. Then there are so many points to be remembered as essential to good work, that the profession is no sinecure. But having decided that she can qualify, the prospective nurse will find in this book a wealth of information on nursing in all of its phases, hygiene, anesthetics, first-aid and after treatment of accidental wounds and injuries, the nursing of children, gynaecological and obstetrical nursing, massage, medical electricity, drugs and their administration, poisons, diets and sickroom cookery, etc. Books on nursing rarely appeal to pharmacists, but if the members of that profession would familiarize themselves with the general principles of nursing as set forth in this volume, as well as with the materials and remedies employed by physician and nurse in the treatment of disease and which are discussed therein, they would be far better equipped to meet and supply in an intelligent manner the demand for sickroom accessories than many of them have been in the past.

STATE "PURE DRUG" LAWS enacted since the passage of the National Food and Drugs Act June 30, 1906, with a reprint of said act as amended. 8 vo., 732 pages. Compiled by the Proprietary Association and the National Wholesale Druggists' Association.

This compilation of the various laws which affect the manufacturer or dealer in drugs and remedies is by far the largest in size of volume of any the associations named have ever issued. The laws cover practically every angle of medicinal manufacturing, for besides the acts named there are given the revenue law of 1917, the child labor law, the Harrison anti-narcotic act, the narcotic laws of several States, Cuban decrees, Porto Rican regulations, Philippine laws, New York City Sanitary code, Canadian Proprietary medicine law, National and State insecticide laws, net weight laws, advertising laws, sample distribution laws, prohibition laws, and other laws relating to the drug trade, including acts of all legislatures to Dec. 31, 1917.

STEARNS' DOSE BOOK.

We are in receipt of a copy of a new edition of Stearns' Dose Book published by Frederick Stearns & Co., manufacturing pharmacists, Detroit, Mich., and revised by Herbert W. Emerson, B. S., M. D., director of the Pasteur Institute, University of Michigan. The doses given cover a wide range of drugs and preparations, all of the U. S. P. and N. F. articles being represented. There are also a table of solubilities, a table of poisons and their antidotes, a chapter on prescription incompatibility, and a list of Latin abbreviations.

THE 'WELLCOME' PHOTOGRAPHIC EXPOSURE RECORD AND DIARY, 1918.

This annual, issued in wallet form with pencil, maintains the high standard of former years, containing a large amount of reference and other information of value to the user of the camera, whether he be amateur or professional. There are hints on exposure and development, tables of factors and other data, with ruled blank pages for making and recording details of negative exposures, personal notes and diary memoranda. Price in the United States, 50 cents.

Professional & Trade Associations

NEW YORK BRANCH, A. PH. A.

Constructive patriotism was the keynote of five "ten-minute men," representing the different branches of the drug trade, who took part in the program of the meeting of the New York branch of the American Pharmaceutical Association, held on April 8 at the New York College of Pharmacy. The somewhat militant atmosphere was further accentuated by the noise on the outside of the tooting of horns of Liberty Loan boosters speeding up and down Broadway, and the martial strains of passing bands. The attendance was large and there was real war news uncovered, showing that in the conservation of a Nation's energies, pharmacy and its closely allied industries had occasion to feel proud of the record they had already made.

Dr. Henry C. Lovis, president of Seabury & Johnson, New York, representing the manufacturers of surgical supplies, was the first speaker. Serving as chairman of the committee of preparedness of the American Drug Manufacturers Association, he recalled that that organization at its meeting in February last year had adopted a resolution looking forward to the possible declaration of war with Germany. His committee had sent a questionnaire to all people in the lines of business covered by the membership of the association, looking to a quick mobilization of effort in case of war. He had worked with the Council of National Defense, the main quest being to ascertain what goods could not be supplied in the large quantities required. It was brought out that the Government's adherence to the metric system would cause much trouble, and a sane, sensible position was taken by the Government which almost agreed to trade packages.

Dr. Lovis said that the committee on standards and on surgical supplies consisted altogether of physicians, but that Dr. Simpson, of the Medical section, had divided the goods wanted into different classes, and the manufacturers of each class were informed that hereafter the U. S. Government would come first in their consideration, the Allies next, and then their regular trade. It might be necessary, the manufacturers were told, for them to give up the non-essential features of their business altogether. The manufacturers worried at first as to whether they might not be acting in opposition to the Sherman act, but their attention was called to the potency of military law. Each group was given a list of supplies and the quantities thereof wanted by the Government, the figures being based on the needs of a million men. The list given the surgical dressing and plaster manufacturers was staggering, although they had increased the capacity of their plants in their efforts to meet the demands of the Allies. To visualize these immense quantities, Dr. Lovis stated that enough gauze had been turned out to reach back and forth from New York to San Francisco seventy times. Other items were cited in like detail, impressing every one present with the enormous and pressing activities of the war. As a "further bit" in his line, Dr. Lovis stated that manufacturers had lost scores of men to the service, that exemptions had been asked for only particularly skilled men, surgical dressing and plaster manufacturers feeling that they were doing a great deal in doing what they could to put the injured man on his feet and into the firing line.

R. C. Stofer, of the Norwich Pharmacal Co. told how his firm and employees were striving to win the war. S. B. Penick, of S. B. Penick & Co., representing the crude drug dealers, said that the Central powers had formerly supplied 50 per cent. of the botanical drugs of the world, and that it was now necessary to go to remote sections of the globe in search of new sources of supply. He asserted that there was now more to encourage the production of necessary drugs in this country than ever before, prices being on an average 200 per cent. higher than they were before the war. Japan, Italy, France, England and China were now supplying badly needed crude drugs which formerly came from other sources. Labor conditions, high wages, etc., did much to keep collectors from the fields at the present time, but those who do gather such drugs are better paid, standards are higher, and foreign shippers who try to foist inferior goods on U. S. purchasers are compelled to seek other fields. Dealers in crude drugs often hold up supplies so that the Government may have first chance at the imports. Mr. Penick considered that the maximum of good health was essential to win the war, and in that direction the drug trade was as necessary as that of the munitions of war.

Saunders M. Norvell, of McKesson & Robbins, representing the wholesale drug trade, said he could not see why he, "an outsider," had also been called to Washington for conference at the outbreak of the war, but he thought that his perspective as an outsider had its peculiar value. He noted the efficient, intelligent way in which the representatives of the drug trade got down to business. He said there was no profiteering in the drug and chemical trade, and the Government is buying cheaper than the retailer. The wholesalers, like those in other lines, had participated in parades, bond selling, their men had gone to the war, etc. Wholesalers, also like others, had suffered from the shortage of clerks, coal, supplies, delays in transportation and strikes, and had their own peculiar problems to solve.

Referring to strikes, Mr. Norvell said they were caused largely by the high cost of living, the contemplation of big fortunes by the $25-a-week employee, and other factors. Wages in the drug trade had advanced 30 or 40 per cent. recently, but prices have not advanced in proportion. One New York house, according to Mr. Norvell, had received an order for 20,000,000 quinine tablets, the largest single quinine order ever given. This order, representing 125,000 ounces or 4 tons of quinine would require 54 tons of cinchona bark, to produce which would require a tree growth of 561 years. The order would be filled, 1,000 tablets each in 20,000 bottles, and the bottles would be placed in 400 wooden cases.

Another interesting story told by Mr. Norvell was how the Government gave a $200,000 order for 1,000,000 Rock Island sponges to the only man who truthfully reported the sponge situation and did not try to get the order. Government buyers circularized the sponge houses in the country, asking for bids on the million sponges. The sponge man referred to by Mr. Norvell, declared that the number of sponges of the kind wanted was not available in the whole country at the time. He was told by his management to explain the whole situation to the Government and to say that the order could not be filled. The authorities wired the sponge man to go to Washington immediately, which he did, with the result that he was given the entire order and sent to Florida to buy the sponges as they were brought in from the fisheries.

Mr. Norvell related other interesting experiences of wholesalers in filling Government contracts and orders and the "speeding up" that was necessary to meet the conditions imposed. He said that one wholesale house had averaged 10 per cent. of its pay roll for Liberty Bond subscriptions. Another wholesale concern has a member of the firm in the medical corps as a lieutenant. As stated before, there has been no complaint of profiteering, and the 50 cent tax on every dollar of 1916 business will be paid uncomplainingly. "Yet," the speaker observed, "the workingman does not fully appreciate the spirit of the time, and we still have strikes. We must educate the workingman to his duty and his part in the war."

Dr. H. V. Arny, of the New York College of Pharmacy, said that the colleges were in somewhat a different position than other institutions and enterprises. It will soon be a question as to whether there will be any work to do, but the colleges of pharmacy were helping the Government to train men for special work, as shown by the instruction undertaken by the New York College of Pharmacy and the University of Minnesota last summer. Prof. A. W. Linton, of the University of Washington C. P., he said, was successful in getting the druggists of various counties in that State to gather digitalis for Government needs. As Dr. Arny saw it, there would be greater need for colleges of pharmacy to join in the work as time went on. At the present time, there are 85 N. Y. C. P. boys in the service.

Chairman J. L. Turner expressed the opinion that the drug trade had even sacrificed profits in selling to the Government, as a nominal 5 or 10 per cent. profit did not tell the entire story. The Government buys on the basis of what the manufacturer paid for his supplies, and not what it would cost to replace the supplies on the date of sale, an arrangement that sometimes meant net loss.

Dr. William Jay Schieffelin outlined a window display campaign to sell War Savings Stamps. Prizes of $25, $10 and $5 stamps would be offered for the first, second and third best and most attractively arranged windows, the scheme of the displays being to feature the stamps. The contest, Dr. Schieffelin said, might be held in abeyance until the Third Liberty Loan campaign is over.

The plan submitted by Secretary Hugo Schaefer at the March meeting to start a movement to provide a gold or bronze medal to be awarded each year to the man or woman who has done most for American pharmacy was approved by the members of the Branch, but the sanction of the parent body will be sought before the campaign is started to raise the necessary $1,000 fund, the income of which is to be used to defray the expense of the award.

BALTIMORE BRANCH

The March meeting of the Baltimore Branch of the American Pharmaceutical Association, held at the Emerson Hotel, was almost entirely devoted to addresses by members who had attended the sessions of the representatives of colleges of pharmacy, wholesalers, retailers, and the various organizations of druggists from a large section of the country to outline a course of procedure with regard to the Edmonds bill for the admission of pharmacists to commissioned rank in the army and navy of the United States. Those who spoke on this subject included Dr. Henry P. Hynson and E. F. Kelly, of the Department of Pharmacy, University of Maryland, and James E. Hancock.

Dr. Hynson expressed his gratification that such an assemblage had become possible, and stated that in former times no community of interests would have been strong enough to bring about a gathering of this kind. He said the young men present especially should feel encouraged to think that wholesalers, retailers, manufacturers and educators could come together and with much enthusiasm plan for the general good of the profession and the public. It showed, he said, that pharmacy was making great advances and that the meeting was an earnest of future increased effectiveness. He then reviewed some of the features of the meeting and outlined the plans that had been formulated to present the case of the pharmacists fairly to Congress.

Mr. Hancock, who followed, spoke about the Edmonds bill from what might be regarded as a literary standpoint, told of its origin and gave a summary of the discussion upon it by the representatives of the different interests. He mentioned the preference shown for designating the head of the proposed pharmaceutical corps in the army as chief instead of director, as provided in the original draft, and said that personally he found "director" as a proper appellation for a pharmaceutical head, suggesting that "chief" might be taken to mean the boss of a fire department or some other public service, and was out of place, applied to the director of the contemplated corps.

Mr. Hancock also read a copy of the address delivered before the House Committee at Washington by Joseph W. England, who was to have been the principal speaker before the Baltimore Branch, but found it impossible to be present. Mr. Hancock emphasized the strong points of the address and stated that in his judgment the personal character of the doctor was quite a determining factor for a pharmacist skilled in compounding prescriptions. He mentioned the case of Major Purnell, of Fort McHenry, Baltimore, who gave few ready made medicines, but studied the constitution of each of his patients and prescribed accordingly. Mr. Hancock deduced from this that the more careful the doctor the greater was the need for a good druggist.

Dr. Kelly, who attended the hearing at Washington as well at the Baltimore meeting, gave an interesting account of the former. He summarized the important points made and mentioned some of the questions fired at the speakers by the Congressmen on the committee. He declared that these questions really did much to clear the situation, but were very trying to the speakers. In conclusion he urged co-operation among all druggists as the only way to certain success.

On motion of Dr. Hynson the branch passed a vote of thanks to Dr. Kelly for his able and effective presentation of the subject.

MEMBERSHIP IN N. P. S. A. GROWING

At the regular monthly meeting of the National Pharmaceutical Service Association held on April 9, 121 applications for membership were acted upon, bringing the total membership in the association well above the 1200 mark.

Although less than one year old, this association has made great progress, and one of the very encouraging reports at the April meeting was that of the President, who stated that Congressman Edmonds had notified him that the propaganda work which had been done, was bearing fruit, in that the number of Congressmen who were interested in seeing the Edmonds Bill passed was constantly increasing. Instead of being urged to vote for the measure, many of them are coming to Congressman Edmonds and offering their aid in having the bill pass the House.

Dr. E. G. Eberle reported for the delegation which had been sent by the association to attend the Conference on the Edmonds Bill at Baltimore, March 18th, and the hearing at Washington, March 19th. A proposition from C. A. Mayo, of New York to have petitions signed by members of the families of soldiers, asking that the Edmonds Bill be passed, was laid before the association, and it was decided to bring this matter before every member at an early date, so as to get the greatest value from this propaganda while the Committee on Military Affairs has the Edmonds Bill under consideration.

Halifax Fund

Work of the New York and New England Committee, organized by the presidents of the New York and New England State Pharmaceutical Associations for the relief of druggists who suffered in the terrible disaster which visited Halifax in December last year, has been energetically pushed during the past few weeks, as will appear from the following list of contributors reported **by Carl S. Ramsay**, president of the Connecticut Ph. A., New Britain, who was elected treasurer:

Amount previously acknowledged	$1,683.00
Parke, Davis & Co., Detroit, Mich	$500.00
E. Fougera & Co., New York	100.00
Whitall Tatum Co., New York	100.00
Florence Manufacturing Co., Florence, Mass.	50.00
Eli Lilly & Co., Indianapolis, Ind.	50.00
Bristol-Myers Co., Brooklyn, N. Y.	50.00
Scott & Bowne, Bloomfield, N. J	50.00
Bauer & Black, Chicago, Ill.	50.00
The Alkalol Co., Taunton, Mass.	50.00
The Upjohn Co., Kalamazoo, Mich.	50.00
Davol Rubber Co., Providence, R I.	50.00
Gibson-Snow Co., Albany, N. Y.	50.00
The Sisson Drug Co., Hartford, Conn.	25.00
Cystogen Chemical Co., St. Louis, Mo	25.00
Martin H. Smith Co., New York	25.00
J. B Williams Co., Glastonbury, Conn.	25.00
H. S. Johnston Drug Co., New York	25.00
Musterole Co. Inc., Chicago, Ill.	25.00
H. Clay Glover Co., New York	25.00
Taylor Instrument Co., Rochester, N. Y.	25.00
Solon Palmer, New York	25.00
The Reiner Company	25.00
A. S. Hinds, Portland, Me.	25.00
George L. Claflin & Co., Providence, R. I.	25.00
H. H. Hay Sons, Portland, Me.	15.00
F. R Keighley	10.00
B. B. Culture Lab.	10.00
Carl W. Berg	5.00
Three-In-One Oil Co., New York City	5.00
Herbert Haynes	5.00
Rat Biscuit Co., Springfield, Ohio	5.00
Robbins & Coehen	5.00
Mellier Drug Co., St. Louis, Mo.	5.00
Brewer & Co., Worcester, Mass.	5.00
G. A. Webster, Buffalo, N. Y.	5.00
Guilford Drug Co., Rochester, N. Y.	5.00
Heewaard Sloan Drug Co., Buffalo, N. Y.	5.00
Lewis B. Decker, Catskill, N. Y.	5.00
H. D. Cornell, Hillsdale, N. Y.	5.00
Beeler Drug Co., Hamilton, O.	5.00
T. F. Buckley	2.00
H. I. Leith	2.00
Max Markensohn	2.00
Ross Bros. Pharmacy	2.00
R. De Angelis	2.00
A. E. Adams, Auburn, N. Y	2.00
G. T. Getman, Lyons, N. Y.	2.00
C. F. Walters, Buffalo, N. Y.	2.00
Leighton & Grotjan Buffalo, N. Y.	2.00
Ed. Henderson, Catskill, N. Y.	2.00
C. H Schoonmaker, Kingston, N. Y.	2.00
W. B. Connor, Margaretville, N. Y.	2.00
E. D. Truman, Bainbridge, N. Y.	2.00
B. B. Hyde, Afton, N. Y.	2.00
A. E Whittaker	1.00
H. & L. Cunney	1.00
W. T. Hillis	1.00
C. F. Gilson	1.00
H L. Chatterton	1.00
Oscar Roberts	1.00
J. Fratantua	1.00
C. E. Scott	1.00
F. H. Finley	1.00
G. W Shaw	1.00
William F. Hands	1.00
H. J. Parker & Son	1.00
A. W. Anderson	1.00
Ira L. Williams, N Hartford, N. Y.	1.00
Leroy C. Baker, Watertown, N. Y.	1.00
Isaac Holton, Trumansburg, N. Y.	1.00
Christiance-Dudley Pharmacy, Ithaca, N. Y.	1.00
Daniels & Cook, Ithaca, N. Y.	1.00
Nye Drug Co., Cortlandt, N. Y.	1.00
Fred G. Smith, Waterloo, N Y.	1.00
L. M. Wheat, Moravia, N. Y.	1.00
Fred S. Hawley & Son, Moravia, N. Y.	1.00
E J. Haynes, Naples, N. Y.	1.00
A. L. Smith, Auburn, N. Y.	1.00
Frank H. Kenny, Auburn, N. Y.	1.00
Wm. P Colvin, Lyons, N. Y.	1.00
L. E. Jones, Newark, N. Y.	1.00
W. G. Carpenter, Lyons, N. Y.	1.00
Williams Clements, Sodus, N. Y.	1.00
H. S. Mosler, Newark, N. Y.	1.00
Knapp Drug Co., Sodus, N. Y.	1.00
H. G. Tatz, Geneva, N. Y	1.00
John J. Monahan, Auburn, N. Y.	1.04
E. D. Reeves, Batavia, N. Y	1.00
Bronson & Richardson, Livonia, N. Y.	1.00
Alberty Drug Co., Holley, N. Y.	1.00
Wright & Ross Drug Co., Medina, N. Y.	1.00
I. D. Bramer, Fairport, N. Y.	1.00
R. D. Howard, Castete, N. Y.	1.00
M. B. Butler, Inc., Niagara Falls, N. Y.	1.00
G. Logomgyiore, Niagara Falls, N. Y.	1.00
A. B. Hupp, Fairport, N. Y.	1.00
D. W Briggs, Palmyra, N. Y.	1.00
The Cummings Pharmacy, Castile, N. Y.	1.00
R. W. Blackney, Angola, N. Y.	1.00
City Drug Co., Niagara Falls, N. Y.	1.00
Lamb & Cowan, Westfield, N. Y.	1.00
J. M. Franklin, East Rochester, N. Y.	1.00
J. A Corbett, Silver Springs, N. Y.	1.00
B. A. Cramer, Rochester, N. Y.	1.00
C. L. Cuff, Rochester, N. Y.	1.00
Elmer A. Chilson, Rochester, N. Y.	1.00
W. A. Oberlies, Rochester, N. Y.	1.00
Ballagh & Suttler, Rochester, N. Y.	1.00
LaMay Drug Co., Rochester, N. Y.	1.00
Maid Bros., Rochester, N. Y.	1.00
A. C. Dempsey, Rochester, N. Y.	1.00
H. J. S. Reynolds, Rochester, N. Y.	1.00
H. B. Ecker, Corning, N. Y.	1.00
Ernest R. Bordwell, Penn Yan, N Y.	1.00
Lamb's Pharmacy, Corning, N. Y.	1.00
H. C. Zeamer, Pleasantville, Pa.	1.00
Hellgren Drug Co., Jamestown, N. Y.	1.00
F. M. Clark, Jamestown, N. Y.	1.00
E. H. Tinklefaugh & Co., Girard, Pa	1.00
John M. Riesenman, Franklin, Pa.	1.00
O'Hara & Condra, Titusville, Pa.	1.00
Emporium Drug Co., Emporium, Pa	1.00
Singer Weil Drug Co., Buffalo, N. Y.	1.00
Freeman's Pharmacy, Buffalo, N. Y.	1.00
L. N. McCauley, Buffalo, N Y.	1.00
Community Drug Store, Buffalo, N. Y.	1.00
J. E. Twohey, Buffalo, N. Y.	1.00
Wallace A Briggs, Williamstown, Mass.	1.00
James J. O'Keefe, North Creek, N. Y.	1.00
R. B. C. Lawrence, Malone, N. Y.	1.00
Dewey & Smith, Malone, N Y.	1.00
Hyde Drug Co., Malone, N. Y.	1.00
Edwin D. Cook, Chateaugay, N. Y.	1.00
Eugene De La Mater, Saranac Lake, N. Y.	1.00
Ezra W. Carter, Cohoes, N. Y.	1.00
U. P. Van Rensselaer, Mechanicsville, N. Y.	1.00
E. E. DeMarsh, Cohoes, N. Y.	1.00
Martin McDermott Estate, Cohoes, N. Y.	1.00
Archibald Bros., Cohoes, N. Y.	1.00
C. A. Kahl, Troy, N. Y.	1.00
Stevenson's Pharmacy, Schenectady, N. Y.	1.00
F. D. Ostrander, Gloversville, N. Y.	1.00
Pierson & Brunt, Gloversville, N. Y.	1.00
A. A. Farthing, Gloversville, N. Y.	1.00
Joseph E. Sweeney, Ballston Spa, N. Y.	1.00
William C. Barton, Saratoga, N. Y.	1.00
Mac. Finn, Saratoga, N. Y.	1.00
Henry M. Wells, Saratoga, N. Y.	1.00
Moore & Caldwell, Schenectady, N. Y.	1.00
Thomas R. Ledlie, Saratoga, N. Y.	1.00
R. J. Lindsay, Amsterdam, N. Y.	1.00
William Wilson, Amsterdam, N. Y.	1.00
Mutimer & Lindsay, Amsterdam, N. Y.	1.00
F. I. Adams & Bros., Amsterdam, N. Y.	1.00
N C. Becker, Amsterdam, N. Y.	1.00
Frank S. Thyne, Johnstown, N. Y.	1.00
C. B. Skinner & Co., Amsterdam, N. Y.	1.00
George Rogers, Amsterdam, N. Y.	1.00
M. W. Rood, Ballston Spa., N. Y.	1.00
E. M. Norton, Andes, N. Y.	1.00
Leland C. Yale, Bainbridge, N. Y.	1.00
J M. MacGibbin, Sidney, N. Y.	1.00
Frederick Bailey, Downsville, N. Y.	1.00
Dyke's Drug Co. New Berlin, N. Y.	1.00
W. A. Jones, Oxford, N. Y.	1.00
Albert Hutson, Oneonta, N. Y.	1.00
H E. Lane, Walton, N. Y.	1.00
Edward H Hull, Westfield, Mass.	1.00
Reed Hogan, Cobleskill, N. Y.	1.00
Leyd M. Stevens, Cobleskill, N. Y.	1.00
Winnie & Seever, Seward, N. Y.	1.00
Fred J. Hayden, Buffalo, N. Y.	.50
G. Rosenthal, Rochester, N Y.	.50
W. J. Hawkins, Holley, N. Y.	.25
	$1,696.75
Total acknowledged to date	3,379.75

The exports of camphor from Japan during November, 1917, amounted to 194,665 kin, making a total for eleven months of 2,972,519 kin, against 4,899,176 in the same time in 1916 and 3,533,183 in 1915. The United States received 1,460,998 kin in November, 1917, against 1,917,004 in 1916.

DRUG TRADE ROLL OF HONOR

ERNEST SCHNEIDER, Oliver & Drake Co. pharmacy, Elizabeth, N. J., sanitary corps U. S. Regular Army.

JOHN E. MIDDLETON, Oliver & Drake Co. pharmacy, Elizabeth, N J., 325th Infantry, U. S. Army.

ROY BENCE, former owner of Bence pharmacy, Pittsfield, Mass. U. S. Army.

JOHN E. MIDDLETON, Oliver & Drake Co. pharmacy, Elizaacy, Lawrence, Mass., Naval Reserve.

GEORGE T. ROWSE, druggist, Homestead, Pa., Medical Corps, U. S. A. Washington, D. C.

JAMES HAWTHORNE, Virginian pharmacy, Victoria, Va., National Army, Camp Lee, Va.

LOUIS H. RUBSAM, secretary J. Rubsam Co., druggists' sundries, 97 Reade street, N. Y., U. S Naval Reserve.

FRANK L. McCARTNEY, The Albodon Co., New York, captain, Medical Supplies Department, Washington, D. C.

EDWARD T. RODENBECK, The Albodon Co., New York, sergeant Co. I, 305th infantry, Camp Upton, N. Y.

BENJAMIN A. HAYES, chemist Lazell Perfume Co., New York, hospital apprentice, 1st class, U. S. Navy, Naval Base No. 6, Bay Ridge, N. Y.

H. D. GORING, Lazell Perfume Co., New York, pharmacist's mate, Naval Recruiting Station, New York.

JOHN ZWACK, former proprietor of the International Pharmacy, Chicago, Ill., National Army, Camp Grant, Ill.

WALTER SCHULTZ, druggist 4201 West 12th street, Chicago, Ill. Medical Department, 333rd Heavy Field Artillery, N. A., Camp Grant, Ill.

FREDERIC E. HUMPHREYS, Humphreys' Homeopathic Medicine Co., New York, major, 102nd U. S. Engineers.

FREDERIC P. HUMPHREYS, Humphreys' Homeopathic Medicine Co., ensign, U. S. Navy, 1st asst. engineer, U. S S. Texas.

CHARLES DECKER, Humphreys' Homeopathic Medicine Co., corporal, U. S A., Camp Upton, N. Y.

ANDREW GROH, Humphreys' Homeopathic Medicine Co., Camp Meade, Md.

EDWARD SHEPARD, F. P. Stone drug store, Norway, Maine, Medical Corps, Regular Army, Reserve Officers' Training Camp, Fort Oglethorpe, Ga.

MILO McALLISTER, Stone's drug store, Norway, Maine, Medical Department, 1st Vt. Infantry, Camp Green.

PAUL BROOKS, Stone's drug store, Norway, Maine, Medical Department, 1st Vt. Infantry, Camp Green.

WILLIAM H. HOVEY, Allen's pharmacy, Winchester, Mass., Fort Warren, Boston Harbor, Mass.

FRED WILLIAMS, Durgin's drug store, Winchendon, Mass., Medical Corps, Camp Devens, Mass.

JOHN REINHARDT, Liggett's store, Manchester, N. H., Medical Department 64th Infantry, Fort Bliss, Texas.

FRED N. KNAPP, junior member of the Public Drug Co., Redwood Falls, Minn., Medical Corps, U. S. A., Camp Merritt, Dumont, N. J.

ELMER HANE, Red Cross Drug Store, Virginia, Minn., pharmacist, Naval Hospital, Pelham Bay, N. Y.

JOE ELLIOTT, A. Skei Pharmacy, Fessenden, N. D., Army in France.

HARVEY A. SCOTT, from Spicer's drug store, Albert Lea, Minn Hospital Corps, Great Lakes Training Station, Ill.

H. W. C. MAUPIN, son of Robert E. Maupin, Ph. G., Pattonsburg, Mo., lieutenant Co. K, 356th Infantry, U. S. A.

GEORGE H. MOORE, Edward J. Moore Sons, New York, sergeant, Ambulance Corps 33.

In service from Gilpin, Langdon & Co., Baltimore, Md.:

DONALD N. GILPIN, captain, 315th F. A. N. A. School of Fire for F. A., Fort Sill, Oklahoma.

THOMAS J. LEWIS, sergeant Co. D, 115th Infantry, Camp McClellan, Ala.

ROBERT LOUIS McGRATH, private Co. C, 110th Machine Gun Battery, Camp McClellan, Ala.

In service from the Kohler Mfg., Co., Baltimore, Md.:

ROBERT E. ESSIGG, chief clerk, U. S. headquarters, Fort McIntosh, Laredo, Texas.

H. L. ERNST, Co. C, 325th Infantry, Camp Gordon, Atlanta, Ga.

F. A. DICKE, U. S. Army Ambulance Service, Section 569.

THOMAS E. ROSE, Co A, 318th Infantry, Camp Lee, Va.

ROYAL W. WETHERALD, Chester Kent & Co., Boston, Mass., ensign U. S. Navy Aviation Force.

A. PAGE BROWN, Chester Kent & Co., Boston, lieut. 303rd F A.

EDWARD J RUF, Antikamnia Chemical Co., St. Louis, Mo., captain 129th Field Artillery.

J. E. JOHNSON, Sargent's drug store, 23 N. Wabash ave., Chicago, Ill., sergeant, Base Hospital No. 14, Camp Custer, Battle Creek, Mich.

WILLIS A. DIEKEMA, advertising manager DePree Chemical Co., Chicago, Ill., 1st lieutenant, on service in France.

The University of Iowa College of Pharmacy supplies the following list of graduates and students who are in the service:

J. A. ROONEY, ex '15. 350th Field Hospital Corps, Camp Dodge, Ia.

RAY B. SMITH, '19. Mt. Pleasant, Ia., National Army.

C. E. JACOBS '14. Fontanelle, Ia., U. S. Army.

E J. NEISTER, '17, Cedar Rapids, Ia., Great Lakes Training Station.

W. E. PALFER, '14, U. S. Marine Corps, Quantico, Va.

C. E. FERGUSON, '15, Marshalltown, Ia., Evacuation Hospital, No. 18, M O. T. C., Fort Riley, Kansas

Parke, Davis & Co., manufacturing pharmacists, Detroit, Mich., report the names of 417 on the "Honor Roll" of that house, 189 men being in the service of the United States and Canada; 189 in Great Britain, and 39 in the service of France, Italy, Russia, East India and Australia. The names of those enrolled from the U. S. follow:

H. D. Archer, New York.
Sergt. Chas. L. Armstrong, Baltimore,
George A. Aronstamm, Detroit.
Maj. J. W. Baeslack, Detroit.
J. Barrocq, Detroit.
Lieut. Stuart Baxter, Detroit.
Paul Benz, Detroit.
Chas. F Bird, Baltimore.
Mus. E. F. Budnik, Chicago.
Joe Blaydon, Detroit.
C. Brockstoelle, Detroit.
H. Brink, Kansas City.
R. P. Buelow, Detroit.
Otto Bullis, Detroit.
F. Cesler, Detroit.
Richard Chapline, Kansas City.
Ernest Chapman, Kansas City.
Sergt. W. M. Chase, Detroit.
Francis Cogan, Detroit.
A. Cohan, Detroit.
James Conroy, Detroit.
Wm. Cook, Detroit.
B. C. Craig, Detroit.
A. F Curtis, Detroit.
Frank Czenkus, Detroit.
C. Daney, Detroit.
Sergt. K. L. Darnall, Kan City.
C. G. Davey, Detroit.
Z. Deloreau, Detroit.
Thompson Dick, New Orleans.
C. F. Dougherty, Detroit.
Ed. Durnill, Kansas City.
Geo Dunklau, Chicago.
Harry Dykes, Detroit.
C. Ellis, New York.
Frank M. Evans, Indianapolis.
J. Ferensz, Detroit.
Lieut. George B. Fink, Jr., Detroit.
Major Philip Gath, Detroit
P. Gavigan, Detroit.
H. F. Gehert, Detroit.
W. W Gifford, New York.
Capt. E. J. Gordon, New York.
Wm. Goetzinger, Detroit.
Ross B Grady, Minneapolis.
Harry V. Gabel, Detroit.
N. Gregor, Detroit.
W. H. Griffin, New York.
Wilbur Gutoff, Detroit.
Lieut. Eugene Hall, Kan. City.
Max Hartwick, Detroit.
Louis Hasbrouch, New York.
Corp. Ernest E. Hay, Kan. City.
Grant H. Heidbreder, Chicago.
R. A. Henkel, Chicago.
Chas Herbert, Detroit.
Adolph W. Hegberg, Chicago.
Fred Hofmann, St. Louis.
Leo Housh, Kansas City.
C. R. Housh, Kansas City.
J. L. Huber, Detroit.
Ralph Ingebritzen, Detroit.
Alexander Jasinski, Detroit.
Daniel Jeffrey, Detroit.
Ernest Jensen, Detroit.
R. Johnston, Detroit.
Richard Keck, Detroit.
S. J. Kellaway, Detroit.
Roger Kull, Detroit
Sergt. C. E. Langfield, Detroit.
James H. Leslie, Baltimore.
Stanley Lewon, Detroit.
Corp E. R. Lovejoy, Detroit.
John Luciano, Detroit.
D. J. Lynch, New York.
William Lyons, Detroit.
Thomas Maccagnone, Detroit.
D. MacIntyre, Detroit
F. Marcano, New York.
Capt. C S. Marden, New York.
Corp E T. Marion, New York.
Arthur Matthews killed, Det.
S. Matthews, New Orleans, colored
S Maudick, Detroit.
Maj. C. P. McCord, Detroit.
S. H. McDill
Corp. George W. McGowan, Chicago.
Corp. J. W. McKew, Baltimore.
Sergt. J. F. McManus, Detroit.
Emmitt Means, Detroit.
Edward Metras, Detroit.
A. Miller, Detroit.
Lieut. J. E. Miller, Detroit.
A. Mistretta, Detroit.
Frank Mitchell, Detroit.
Sergt. R. E. Mooney, Detroit.
Frank Morcaldi, New York.
Capt. E. H. Morgan, Mpls.
Victor N. Morrison, Detroit.
George Moses, Detroit.
Frank Moyeri, Detroit.
August J. Mueller, Chicago.
J. W. Murphy, Detroit.
J. B. Mushet, Detroit.
Charles Nash, New York.
Louis Nazdraveczsky, Detroit.
E Nelson, New Orleans.
D. Oles, Detroit.
James Ogom, Detroit.
J. Ozdarski, Detroit.
Lieut. J. H. Page, New Orleans.
Richard Paradis, New York.
Walter Parnitsky, Detroit.
G. S. Patton, Detroit.
P. R. Phelps, New York.
F. F. Phillips, Detroit
H. W. Pitt, Chicago.
Walter Plachter, Detroit
Dr. T. E Pugh, Chicago.
L. F. Pleasant, Detroit.
Sergt. J. T. Poling, Detroit.
George Prendergast, New York.
Lon V. Price, St. Louis.
Alanson Raynor, New York.
R. R. Reed, New York.
Fred Riebold, Baltimore.
John Roebitz, Detroit.
Ismal Roden, Detroit.
Joseph Rosemary, Detroit.
J. Rossi, New York.
Wm Sawyer, Detroit.
Paul L. Saylor, Detroit.
W. Schaubhuth, New York.
Lieut. D. H. Schwengel, Seattle
J. M. Scott, Kansas City.
Paul Scott, Detroit.
Lieut Chas. E. Sima, Baltimore.
John W. Simon, Detroit.
M. E. Slater, Detroit.
Clement Smith, Detroit.
R. Smith, Detroit.
Stephen Soldatt, Detroit.
C. R. Spalding, Chicago.
Geo. Steffes, Detroit.
E. G. Steis, Detroit
E. Stephenson, Detroit.
W. J. Stone, Detroit.
Lieut. H. M. Strachan, St. Louis.
John Taylor, Detroit.
W. R. Tenney, New York.
Wm. Tobin, New York.
Wm. Tocco, Detroit.
Leon Tonge, Detroit.
James Turner, Detroit.
Emil Van Damme, Detroit.
E. Votey, New York
S. B. Wade, Chicago.
A. T. Wainwright, Detroit.
Ward Wales, Detroit
Lieut. A. C. Walker, Baltimore.
L. H. Wallace, Detroit.
C. F. Walton, Detroit.
C. V. Warner, Detroit.
Alphonse Warnez, Detroit.
George C. Weston, Chicago.
Ralph R. Wheeler, Detroit.
Howard Wheeler, Detroit.
Dr. E. P. Wightman, Detroit.
Lawrence Will, Pittsburgh.
E. B Wood, Baltimore.
Wm Wrobel, Detroit.
J. H. Wyllie, Detroit.
Wells Zimmerman, Detroit

Schools and Colleges

PROF. E. FULLERTON COOK

Prof. E. Fullerton Cook, who in the reorganization of the faculty of the Philadelphia College of Pharmacy following the death of Prof. Joseph P. Remington, was recently advanced to the full directorship of the pharmaceutical laboratories of that institution, has been identified with pharmacy for a score of years, his recent work in connection with the preparation of Remington's "Practice of Pharmacy," the "United States Dispensatory" the Revision Committee of the Pharmacopoeia and the National Formulary, etc., showing that he has had a wide acquaintance with the literature of the profession. He was born at Lionville, Chester County, Pa., Feb. 17, 1879, but spent most of his boyhood days at Waynesboro. Pa., where his father was the Lutheran minister. There he graduated from high school in 1895, and immediately started work in the retail drug store of Mentzer & Clugston in Waynesboro where he continued until 1879, when he went to Philadelphia to attend the Philadelphia College of Pharmacy, securing a position with George M. Beringer, Camden, N. J.

Prof. E. Fullerton Cook

Graduating in 1900 and receiving the operative pharmacy and Webb prizes, he was offered the position of assistant director of the operative pharmacy laboratories of his alma mater, and in the following Spring, was given the opportunity of assisting in the revision of the 4th edition of Remington's Practice of Pharmacy and the 19th edition of the United States Dispensatory. About this time Prof. Remington was elected chairman of the Revision Committee of the U. S. P. and all effort was thenceforth concentrated on the 8th revision of that important work, Prof. Cook materially assisting in the experimental work at the Philadelphia and Longport laboratories. He was a delegate to the U. S. P. Convention in 1910 and has maintained a close association with the publication of the ninth revision of the U. S. P. as Prof. Remington's assistant. Besides his active connection with the publication of Remington's "Remington's "Pharmacy" and the "United States Dispensatory," noted above, he also served as a member of the N. F. Revision Committee and as a member of its editing committee.

Although devoting much energy of his literary work, Prof. Cook has not neglected his college work, and during his eighteen years as a member of the faculty has served, first as assistant director of the laboratories and later as associate professor, being instrumental in developing and greatly extending the courses of the department. His recent advancement was a logical sequence to this long service. Prof. Cook is well known to pharmacists throughout the country, being an active member and a participant in the activities of the American, Pennsylvania, and New Jersey pharmaceutical associations. To Prof. Cook and Prof. LaWall jointly was bequeathed the entire scientific library of Prof. Remington, which the legatees have placed at the service of the college.

UNIVERSITY OF MICHIGAN

The Alumni of the University of Michigan College of Pharmacy are arranging for the presentation of a life-size portrait of the late dean, Dr. Julius O. Schlotterbeck to the University during the celebration of the fiftieth anniversary of the establishment of the college of pharmacy, which is to be held at Ann Arbor on June 26.

Leon Makielski, an artist who has done much notable work in Ann Arbor, has been selected to paint the portrait, the fund to be raised for the purpose amounting to $750. Every alumnus of the College of Pharmacy has been asked by the committee in charge to contribute $2 toward this fund, although it is believed that some will give more. An endeavor will be made to have every alumnus interested in this memorial to the late dean, who successfully carried the work of the college forward from the death of Dr. A. B. Prescott in 1905 until his death last year. The names of the general committee in charge are A. S. Parker, '79, chairman; F. A. Thompson, '81, G. M. Schettler, '89, L. A. Seltzer, '92, J. W. T. Knox, '95, W. H. Blome, '98, O. W. Gorenflo, '98, and F. F. Ingraham, Jr., '11, secretary.

The committee on publicity for the celebration of the 50th anniversary of the College of Pharmacy, consisting of J. W. T. Knox, F. F. Ingram, Jr. and Norman I. Taylor, announce that arrangements are well under way and that there will be plenty of attractive entertainment. The event promises to be the biggest homecoming of old grads ever inaugurated in the life history of the college, and every alumnus is asked to be present and to help make it a record breaking success. Dr. A. B. Stevens and Dr. Henry Kraemer are planning an interesting program for the exercises which are to be held on June 26.

UNIVERSITY OF ILLINOIS

The initial number of a series of lectures planned for the second half of the second semester of the School of Pharmacy consisted of an address to the senior class by Francis W. Shepardson, director of the State department of education and registration.

Baxter Lightfoot and Moses Covnot, members of the junior class, have enlisted in the hospital corps of the Army. Clarence W. German, also a junior, has been called to the colors. F. E. Patrick '12 has finished the course in the aviation school at the University of Illinois and is now at Camp Dick, Dallas, Texas. Walter Schulz '13 has disposed of his drug store at auction and is now a member of the medical corps of the 333rd heavy field artillery at Camp Grant.

The handsome showcase and collection of U. S. P. and N. F. preparations prepared by the Propaganda Committee of the Chicago Retail Druggists Association and shown at the N. A. R. D. convention at Cleveland, and subsequently at the Drug Show in Chicago, has been installed at the School and has attracted much favorable comment. It is planned to show this collection at the coming convention of the American Medical Association in Chicago next June.

A new feature added this year to the Ph. G. course provides for obtaining practical experience in the industrial laboratory, recently installed in the laboratory building of the College. Here many of the types of machinery met with in commercial work are exhibited on a small scale, while in a few cases the full-sized machine is at the disposal of the class. All are power-driven and show the latest methods in pharmaceutical manufacturing. The whole is installed in light roomy quarters having concrete floors and walls capable of being entirely flushed out at the end of a day's work. The student is introduced to each step of the work and required to carry it out himself, that he may become familiar with some of the practices in chemical laboratory work.

Lawson J. Cooke, '13, who enlisted in the Army last spring, is with Hospital Unit No. 13 at Ft. McPherson, Ga.

Dr. Richard J. Bedford, '93, lieutenant in the medical reserve, has been ordered to report for duty at Fort Des Moines.

The Chi Chapter Kappa Psi Fraternity, recently gave a theatre party which was followed by a dinner at the North American Restaurant. The members of the faculty were guests. The officers of the Chapter are: Regent, W. J. Formhals; vice-regent, A. Ernest Muench; secretary, George W. Wood; treasurer, Erwin J. Haeberle; historian, Arthur Grosse; chaplain, Harold Shinder.

J. E. Leone, '18, who enlisted in the Navy at the close of his senior year, sends word that he is seeing active service. At the time he wrote he was at a French port.

Joseph A. Unger of the senior class has been called for military service, so also has John M. Coffey of the junior class. Several other students have recently passed the medical examination and are expecting to be called at any time. A large majority of both classes are within the draft age.

NEW YORK

As was to be expected, a great number of students have enlisted in various branches of the service and many have been drawn for service in the National Army. It appeared rather a pity that so many who have almost completed their courses should be called away just at this time before graduating, but fortunately, the Education Department has ruled that students who have faithfully attended upon at least three-fourths of the term's sessions, may be graduated, provided their scholarship has been satisfactory up to the time of their departure.

The number of graduates and undergraduates in service is growing so rapidly that some days we have as many as ten additions to our roll of honor. At present the known number is 140. We are happy to report no casualities or deaths except in the case of Albert Cooke, '98, a medical officer in service with the British Army, and who died in Mesopotamia.

At the hearing of the Edmonds Bill, Associate Dean Diekman represented the College and reported that undoubtedly some recognition of the pharmacist in the army will develop from the efforts being made by those interested.

A very well attended smoker was held by the Senior Class at Pabst Grand Circle, and the Junior Class recently held a ball at the Hotel Ansonia. About one hundred couples attended the dance and the entire affair proved a great success.

The Sigma Mu Iota Fraternity held its second annual smoker on March 25, which those who attended pronounced to have been a thoroughly enjoyable affair.

The Library recently received some fifty volumes from James Foulke, of Jersey City. This gift included a complete file of the proceedings, year books and journals of the A. Ph. A. from 1882. From David Costelo, proprietor of the Neergaard Pharmacy, have been received some interesting relics, chief among which is an old notebook in which William Neergaard kept his notes on the lectures of Professor E. R. Squibb, during the session of 1870-71. Miss Rudolph, the assistant librarian, is planning to arrange in one corner of the showcase an exhibit from the old Neergaard Pharmacy which will include this notebook and the beautiful Flemish mortar and horn scoops that Mr. Costelo presented during the Loan Exhibition last spring. The Secretary was ordered to convey to the donors the sincere thanks of the Board.

The following prizes have been founded during the past year and will be awarded at the 1918 Commencement for the first time;

The Squibb Prize, consisting of Fifty Dollars, founded by E. R. Squibb & Sons, is to be awarded to the graduate of the College Course who has shown the greatest proficiency in analytical chemistry during both years of the course, as determined by his laboratory record.

The Weinstein Prize, founded by the New York Retail Druggists' Association in memory of the late Dr. Joseph Weinstein, consists of a microscope, and is to be awarded to the graduate of the College Course who has shown the greatest proficiency in analytical chemistry during his second year, as determined by both his term work and the examination record, provided that such student has not received any other prize. In such case, the award is to be made to the student who has secured the next highest rating in the same subject.

The Louis Dohme Prize, consisting of One Hundred Dollars, founded by Sharp & Dohme is to be awarded to the graduate of the College Course who, in the opinion of the Department of Materia Medica, has demonstrated the best practical knowledge of the drugs of the United States Pharmacopoeia and National Formulary, as determined by the term's work and the examination.

UNIVERSITY OF OKLAHOMA

The school of pharmacy is to be moved into the chemistry building during the first semester of next year, the space now occupied by the school in the science hall being too small to accommodate the number enrolled. With the additional room afforded in the new quarters it will be possible to care for many more students.

Data for the purpose of showing the efficiency of the natural gas gasoline plant near Oklahoma City was recently gathered by the students in chemistry under the direction of Prof. F. E. Padgett of the chemistry department. The tests, such as taking temperature, pressure, rates of flow, etc., lasted for ten hours, and these with other data will be made into scientific control charts showing the efficiency of operation of the plant.

The school of pharmacy has purchased a large roll of honor card on which will be placed the names of the pharmacy alumni now in service. In twenty-five years the school has graduated 198 men students, and of these 53 are at present in military service.

An examination will be held at the school of pharmacy on June 25 for the award of the Fairchild scholarship of $300 given each year to a pharmacy student in one of the schools belonging to the American Conference of Pharmaceutical Faculties. The examination will be conducted by Dean H. S. Browne of the school of pharmacy, and W. R. Jarret, secretary of the Oklahoma board of pharmacy.

Senior pharmacy students are now taking a series of lectures on pharmaceutical jurisprudence given by members of the law schools. The first lecture was given by Dr. Victor H. Kulp on "Commercial Paper." Other lectures announced in the series are to be given by Dean Julien C. Nonnet, Dr. H. H. Foster and Dr. L. P. Wilson.

Dean H. S. Browne recently returned from a ten days' trip to Washington, D. C., where he attended a meeting of the American Conference of Pharmaceutical Faculties. He expresses confidence that the Committee on Military Affairs of the House of Representatives will report favorably on the Edmonds' bill for the establishment of a pharmaceutical corps in the Army.

Clarence Knappenberger, Ph.C., '13 is stationed at the medical officers' training camp at Fort Riley, Kansas. He expects to be sent over seas soon.

The Oklahoma Board of Pharmacy held an examination in the laboratories of the school of pharmacy on April 12. Among the candidates for registration who took the examination were four students in the university.

UNIVERSITY OF IOWA

The Phi Delta Chi Fraternity entertained at a dancing party at the chapter house recently. Linus Carter, '19, Montezuma; Glen Taylor, '19, New Market; N. B. Kenney, '19, of Rockham, S. D., and Lloyd Richmond, '19, of Riceville, Ia., were recently initiated as members of the local chapter.

A. C. Phillip, ex '98, of Manchester, was a delegate to the National Convention of War Activities which met in Chicago recently. He was one of three Iowans appointed by Governor Harding.

W. C. Palmer, '14, who was at the San Francisco Naval Station until transferred to Quantico, Va., has successfully passed the examination for promotion in the U. S. Marine Corps.

D. H. Willison, '10, who has been in business at Tampico, Ill., for several years, recently disposed of his business and will go into the Army.

J. A. Rainey, ex '12, now with the 350th Field Hospital Corps at Camp Dodge, was a caller on college friends recently.

E. J. Neister, '17, of Cedar Rapids, Ia., who has been at the Great Lakes Training Station, is enjoying his first furlough.

O. E. Ferguson, '15, who has been with Druggist A. T. Elder, Marshalltown, since his graduation, is now at Fort Riley, Kansas, in Evacuation Hospital No. 12, M. O. T. C.

INDIANAPOLIS

At the 1918 commencement exercises of the Indianapolis College of Pharmacy held in Indianapolis on March 29, 19 men and two women completed the course and were awarded diplomas. The names of the class follow:

Harry C. Morris, Fred Dunnington, Joseph H. Hartman, Guy L. Doggett, Joseph Cartosselli, E. Luther Davidson, Noble L. Deveny, Joseph Easter, George C. Full, Clarence Hill, Miss Ida E. Kassulke, Gilbert B. Langford, Forrest L. Leiser, Harold Linville, J. Earl McCormack, Glenn C. Montgomery, Miss Pearl M. Niles, George E. Oren, James E. Payton, John Risdon and Paul H. Shields.

ATLANTA

Dr. George F. Payne, president and dean of the Atlanta College of Pharmacy was the principal speaker at the commencement exercises of that institution which were held recently in the college auditorium. The following young men received diplomas:

S. J. Bargeron, Georgia; L. C. Collier, Texas; J. R. Cantelou, Jr., South Carolina; L. E. Culpepper, Florida; M. A. Cohen, Georgia; S. L. Fergason, Tennessee; C. M. Hildebrand, Georgia; W. W. Jackson, Arkansas; Nicholas Jackson, Arkansas; M. D. Jackson, Alabama; J. B. Kennington, South Carolina; J. L. Lee, Florida; L. M. Lacy, Georgia; L. J. Lauret, Louisiana; C. E. McWhirter, Tennessee; C. H. McEachern, Louisiana; H. R. Page, North Carolina; C. L. Pace, Mississippi; T. E. Rivers, South Carolina; W. P. Stone, Alabama; B. F. Talfort, South Carolina; J. A. Wren, Georgia; J. A. Wade, Arkansas; C. R. Waldren, Alabama; Roe Williams, Texas; B. T. Watts, Tennessee.

PHILADELPHIA

Professor Vanderkleed, who was recently confined to his Jersey home with a serious illness, is convalescing rapidly.

The LaWall Testimonial Dinner, tendered to the Dean in honor of his election to the Presidency of the American Pharmaceutical Association, was served at the City Club and was largely attended. Among the prominent persons present were Dr. Harvey W. Wiley, Dr. A. R. L. Dohme, Dr. Wilmer Krusen, Professors Arny, Hostmann and Schaefer of New York, S. L. Hilton of Washington and C. A. Mayo of New York. Prof. LaWall's mother and his wife, who is a pharmacist and a worker, were also present.

The Instructors of the College have organized and have elected the following officers: Chairman, Joseph W. Ehman; secretary, Ivor Griffith.

C. Edward Wagner, for eight years in charge of the stock room of the Pharmaceutical Laboratories, leaves the service of the college this month to take up scientific farming.

The graduating class recently spent a very pleasant and profitable day visiting the laboratory of the Smith, Kline & French Co. A repast was served at which Clarence M. Kline presided.

Prof. F. P. Stroup has been very busy superintending the sending out of the Remington Memorial Number of the *American Journal of Pharmacy*, a copy of which is sent to every Alumnus of the College, numbering over 5,000, with the compliments of the College.

Lieut. Hastings Fitzkee, formerly Prof. E. Fullerton Cook's assistant, was a visitor the other day. He is in the aviation service and has already established a record for climbing from a private's rank to a commissioned rank in a few weeks.

Dr. F. E. Stewart, special lecturer at the College, recently delivered a lecture before students of Lafayette College, Eaton, on the subject of "Immunology."

Prof. Heber W. Youngken recently addressed the professional branch of the Germantown Business Men's Association on the subject of Crude Drug Adulterants. The professional branch of the G. B. M. A. consists mostly of pharmacists and chemists.

Dean LaWall, who is the chemist of the Pennsylvania Department of Agriculture, last month delivered an address on "Substitute Foods, Factitious and Other wise," before the annual meeting of the Central Atlantic States Dairy, Food and Drug Officials Association, at the Hotel Adelphia.

SOUTHERN COLLEGE OF PHARMACY

The Spring graduating exercises of the Southern College of Pharmacy, Atlanta, were held recently in the college auditorium, that city, the exercises completing the twenty-eighth session of the institution. Dr. Hansell Crenshaw, of the board of trustees, and Dr. R. C. Hood, dean of the faculty, conferred degrees on the following graduates:

J. P. Anello, Tampa, Fla.; S. C. Asbury, Greensboro, Ga.; Percy E. Blackmon, Buchanan, Ga.; J. C. Berry, Pisgah, Ala.; J. M. Boaen, Guyton, Ga.; C. F. Brannan, Headland, Ala.; D. P. Carpenter, Stark, Fla.; Palmer L. Caldwell, Gastonia, N. C.; John K. Kimsey, Cornelia, Ga.; W. L. Northam, Fayette, Ala.; Percy L. Parker, Notasulga, Ala.; A. Schoenberg, Atlanta.

Credit and Commercial Case Decisions

By GEORGE H. MURDOCK, Newark, N. J.

Unrepeated Telegrams.—Damages cannot be had for delay in delivering an interstate unrepeated message, where contract so provides.—101 A. (N. J.) 773.

Compensation Statutes.—The workmen's compensation statute is a remedial law of prime import, it should be liberally and broadly construed.—101 A. (N.J.) 1033.

Verification of Account.—Verification of statement of account for action on an account for goods sold and delivered may be by a member of firm selling.—93 S. E. (N. C.) 776.

Release of Lessee by Assignment of Lease.—The mere assignment of a lease and the acceptance by the lessor of rent from the assignee does not release the original lessee.—167 P. (Wash.) 923.

Trade Marks and Trade Names.—No one has a right to palm off his goods as those of another by using another's name so as to obtain his business and so as to deceive the purchasing public.—102 A. (N. J.) 16.

Canceled Checks as Vouchers.— While canceled checks are not what the statute contemplates as vouchers, where the evidence shows the payments made and the purpose thereof they are sufficient to support an account of the administrator.—167 P. (Wash.) 905.

Wrongful Discharge.—An employee, wrongfully discharged, is entitled prima facie to recover his stipulated compensation for the remainder of the period, which in case of a drawing account, would be the amount thereof.—166 N. Y. S. 981.

Unfair Competition.—The vital question in cases of unfair competition is not whether dealers are liable to be deceived in buying from the manufacturer or wholesaler, but whether the user is liable to be misled in buying from the retailer.—244 F. (U. S.) 508.

Presumption of Death.—Where insured had been absent without being heard from for seven years, his death will be presumed to have occurred on the day when his clothing and other effects were found in a bathhouse, after which day he did not appear.—106 N. Y. S. 985.

Concurrent Negligence.—No liability attaches to any one for damages sustained by reason of the acts of God and the forces of nature, but a party whose wrongful acts co-operate with, augment, or accelerate those forces, to the injury of another, is liable in damages therefor.—93 S. E. (W. Va.) 809.

Signing Note as Surety.—If a person placing his name on a promissory note does not clearly indicate by appropriate words an intention to be bound in a special capacity, and signs as maker, his liability to the holder is that of a maker, although his relation to a comaker be that of surety.—167 P. (Kans.) 1067.

Restaurant Checking Room.—Where an overcoat is checked at a restaurant, the restaurant is not liable as bailee for the loss of a purse and contents in the pockets thereof, unless it has actual notice of their presence there, or the presence of articles of a similar nature might be presumed.—166 N. Y. S. 978.

Interstate Commerce—Licenses.—It is not an unjust imposition in interstate commerce to require payment of a license fee by all persons distributing bills, circulars, or samples without taking orders or selling the same, since the interstate commerce ends upon the delivery to such persons of the circulars or samples.—197 S. W. (Ky.) 634.

Disclaimer of Liability by Partner.—One who is partner of a business firm may not escape his liabilities as such partner merely because he declares that he will not be responsible for the partnership acts, when he does nothing to alter the business conduct of the partnership, and remains a member of the firm, and suffers it to continue the policy to which he objects.—167 P. (Kans.) 1044.

Voiding Policy of Fire Insurance.—Where an article, the keeping of which on the premises insured is declared by the policy to avoid the same, is being kept and used on the premises at the time of the issuance of the policy and acceptance of the premium and the insurer knows that fact, the right to declare the policy void on account of the keeping of the article is waived.—117 N. E. (Ind.) 273.

Implied Agency.—Agency may be implied where one person holds out another as his agent, and thereby invests him with apparent or ostensible authority as such; it may be implied from prior habit or course of dealing of a similar nature between the parties, or from a previous agency, as where the alleged principal has previously employed the alleged agent as such in transactions similar to the one in question.—167 P. (Idaho) 1029.

Price Fixing.—Stipulations in sales to retailers by the patentee manufacturer of automobiles by which it retains title till the cars have been resold to a user at a stipulated price is not invalid as between them, as against the public policy; the manufacturer not being in exclusive control of an article of commerce for which there is no substantial substitute, but controlling only one of many similar devices which may be purchased on the open market, and the contract, so far as appears, not interfering with the free play of wholesome competition.—244 F. (U. S.) 335.

"Furlough."—"Furlough," as a noun, means "(1) Leave of absence; esp., leave given to a soldier or, sometimes, a government official or employee, to be absent from the service for a certain time; also, the document granting the leave of absence. In the United States army furloughs are given only to enlisted men, officers being given leave of absence. In the United States navy furlough is an extended leave of absence, or a suspension from duty by an exceptive order, on half leave-of-absence pay, given only to an officer. (2) A permit or passport." As a transitive verb, it means "to grant a furlough to; broadly, to allow leave of absence to."—244 F. (U. S.) 625.

Commuting Service.—Where a rairoad company has recognized the propriety and necessity of rendering a peculiar service to suburban communities by establishing commutation rates, a state may, without committing any violation of the Federal Constitution, regulate such rates within the limitation of reasonableness, and may fix rates, for the special services rendered commuters, different from those charged for the general service, as the service rendered a commuter, carrying little baggage and riding many miles on a single ticket for short distances, is of a special character, and different from that given the single way passenger.—38 Sup. Ct. (U. S.) 2.

Women in Pharmacy

CONDUCTED BY EMMA GARY WALLACE

AROUND THE CIRCUIT

Sympathy is extended to Mrs. Jacob Buckstein of Cleveland Chapter No. 21 whose father recently passed away; also to Miss Rose Schmid who has recently parted with her mother, and Mrs. Louis Schmid, mother-in-law of the deceased woman. Both are Chicago Chapter members.

Chicago Chapter, No. 2, W. O. N. A. R. D., have decided to enlarge their war activities. Some time since the chapter members pledged 25 cents each for the War Recreation Fund, and made a donation of 250 interesting books and 28 scrap books for the use of the Army Training Camp libraries. The members are also preparing to contribute to the next Red Cross Fund, to invest in the Liberty Loan and to buy at once, $50 worth of Thrift Stamps. The women are still collecting books to send to the Training Camps. They find that not only are works of fiction wanted, but standard technical and scientific works, French grammars, dictionaries, geographies, and arithmetics.

The C. R. D. A. has promised to furnish the ladies with a hand-power knitting machine. The members meet with an established Red Cross unit at the La Salle Hotel, every Monday and Friday, where they spend the day making hospital supplies, drain pads, pneumonia jackets, and other surgical necessities.

One idea which the Chapter is putting into effect, is worthy of imitation by other Chapters. The members will soon send a letter to the "Lady of the House" in the home of every C. R. D. A. man and druggist they can reach. This ought to increase the membership of the Women's Organization and also succeed in getting a lot of splendid work done for our soldiers and sailors. The ladies in charge of this branch of work are, Mrs. Joseph Forbrick, Mrs. Julius H. Riemenschneider, and Mrs. Isam Light.

At the regular March meeting of the Chapter reports were made on Federated Club Work, Mrs. Haering, one one of the Chapter members, telling of the Child Welfare Work that was being done and Mrs. Merz and Mrs. Mentz, reporting on Educational and Vocational Training.

Mrs. Edward Bailey, President of the First Club District, made a brief talk on "War Relief Work Among the Women's Clubs," emphasizing the necessity of safeguarding soldiers and sailors by providing suitable recreation, home cooking, etc. Mrs. J. Mahaffy, the Chapter Treasurer, has charge of the Per Capita War Fund being raised for this purpose.

Mrs. S. C. Henry gave an account of the Red Cross work being done by the Philadelphia Chapter and Mr. Henry, National Secretary of the N. A. R. D., spoke upon the Hicks and Edmonds Bills. A resolution was drafted, adopted, and sent to the Committee on Military Affairs in Washington, supporting these measures. Mr. Henry emphasized the importance of loyal co-operation with the N. A. R. D. in all its activities during the nation's crisis.

The following ladies were elected to serve on the Nominating Committee: Mrs. W. W. Klore, Chairman, Mrs. Haering, Mrs. Hirsch, Mrs. Collins, Mrs. Crizan, Mrs. Norton and Mrs. Zindt. The annual election was scheduled at the regular April meeting.

At the March meeting of the W. O. B. A. R. D., held at the Women's City Club, Boston. Mrs. George T. Rice was introduced as the speaker of the afternoon, her subject being "Women In Industries." She discussed the subject in a timely manner. A substantial sum was realized from the Whist Party given by the Chapter for War Relief, held at the home of Mrs. Frances L. Hayes.

Youngstown Chapter No. 14 is sewing busily for the Red Cross. The ladies usually meet at the Y. W. C. A. and make an all-day job of it.

Mrs. A. C. Croswell, the new president of Rock Island Chapter No. 15, entertained the members at her home, 1501 Fifteenth St., Moline, Ill., recently. A short business session was held, after which there were card games. The next meeting was scheduled to be held at the home of Mrs. E. Jericho of Moline.

The annual Banquet and Card Party of the Rock Island County Druggists' Association was held at the Manufacturers' Hotel, Moline. After the election of officers for the ensuing year, the gentlemen and the ladies who were the guests of the evening, enjoyed a delicious turkey dinner. After this every one retired to the parlor where 500 was played.

Mrs. W. E. Lee had the honor of being one of the speakers at the Testimonial Dinner recently tendered to Professor Charles H. LaWall, the new Dean of the Philadelphia College of Pharmacy. The Banquet was given at the City Club.

Mrs. Lee received many greetings upon the occasion of her birthday, which significantly occurs on March 4. Among the other pleasant remembrances was a Round-Robin Letter from Chicago Chapter No. 2. The closing paragraph of this letter said; "We feel sure that the entire membership of the W. O. at large joins us in this sentiment, and also in the further wish that we may have you with us many more years, to be our guiding hand in the noble work which our organization does for the druggists and their families throughout the country."

St. Louis Chapter No. 8 is busily engaged in knitting, sewing, and making surgical bandages. At a recent meeting the Chapter voted $5 for Smileage Books for the soldiers. At this meeting Mrs. Ehlich, Mrs. Johnson, and Mrs. Pauley were hostesses.

Queen City Chapter, No. 5, held its March meeting at the Sinton Hotel. Plans were discussed for the following year, and the amount of the annual dues set and collected.

The Chapter sent delegates to the Convention of the South-West District of the Ohio State Federation held at Wyoming, Ohio, Apr. 12th and 13th. The Chapter recently presented a very beautiful "comfort" to the Ambulance Corps.

At the April meeting, held at the home of Mrs. Fred Kotte, Mt. Auburn, Mrs. Schneider, Mrs. Hall and Mrs. Katz assisted in receiving. The Nominating Committee was appointed to prepare the official slate for the coming year.

Miss Margaret Richter has purchased the drug business formerly conducted by E. S. Wingard at Azusa, Cal. The store is known as the Azusa Pharmacy.

OVALTINE NOW MADE IN U. S. A.

Previous to July last year the American market for Ovaltine, a food, beverage was supplied by the European factories in Switzerland and England but according to the Wander Company, of Chicago, manufacturers, the demand for it increased to such proportions that exports from Europe were found to be impracticable and inadequate, and it was decided to erect a plant for the manufacture of the product at Villa Park, Ill. This involved an outlay of $200,000, but the results, the manufacturers state, justified the investment as it solved the problem of uncertain shipments from Europe, and stimulated the demand for Ovaltine in this country.

This product is said to be a concentrated extract of malt, milk, eggs and cocoa, and has been prescribed by European physicians for almost half a century. The parent plant is at Berne, Switzerland, where Dr. A. Wander started to make the product more than two decades ago. The English factory has depots in many foreign countries. Until July of last year distribution for the American market was made through the New York agent.

INTRODUCING MR. MAJOR'S GRANDCHILD

Alphonse Major, of the Major Mfg. Co., manufacturers of Major's Cement, New York, is a proud grandfather and he derives considerable pleasure from making his many friends and customers in the trade acquainted with his young grandchild Alphonse Bayard Bare, who, Mr. Major states, was two years old on March 31, the accompanying portrait of the youngster being a reproduction of a photograph taken a few days before his last birthday. His parents are Mr. and Mrs. Jeffrey Bare, Mrs. Bare being Mr. Major's only daughter and who has been associated with him in business for the past ten years or more.

ALPHONSE BAYARD BARE

A MODERN RUBBER SUNDRIES FACTORY

The average layman would be surprised to see the many processes through which the sap of the rubber tree must go before reaching the user in the form of a hot water bottle, or any other of the rubber sundries sold by druggists. The factory equipment required for quantity production is essential to qualify at moderate price, and the equipment must be speedy and efficient and, in addition, each unit must be duplicated many times to produce the volume required. And this requires housing facilities and floor space of large proportions.

The rubber goods factory of The Faultless Rubber Company, at Ashland, Ohio, illustrated herewith is said to be the largest and most modernly and scientifically equipped plant devoted exclusively to the manufacture of druggists' rubber sundries and specialties and surgical rubber goods. About five acres of floor space, except a comparatively small area occupied by the general and factory offices, are fully occupied by the many manufacturing departments, the stock rooms, shipping rooms and other necessary requirements. Add to this factory equipment, the very able and experienced human organization necessary to properly operate the plant; and also consider that expert knowledge of rubber and long experience in handling it are essential to such operation; and you will begin to understand that a rubber goods factory represents a considerable investment, and that its continued and successful operation is based on a fixed policy, which in the case of the factory pictured above, "is to give the ultimate consumer one-hundred cents worth of merchandise" for one dollar."

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912.

Of The Pharmaceutical Era, published monthly at New York, N. Y. for April 1, 1918, State of New York, County of New York—ss.:

Before me, a notary public in and for the State and county aforesaid, personally appeared D O. Haynes, who, having been duly sworn according to law, deposes and says that he is the Business Manager of The Pharmaceutical Era, and that the following is to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse side of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor and business manager are: Publishers, D. O. Haynes & Co. Editor, E. J. Kennedy. Managing Editor, N. W. Haynes. Business Manager, D. O. Haynes, all of No. 3 Park Place, New York, N. Y.

2. That the owners are: (Give names and addresses of individual owners or, if a corporation, give its name and the names and addresses of stockholders owning or holding 1 per cent or more of the total amount of stock.) D O. Haynes & Co. and D. O. Haynes, 3 Park Place, New York, N. Y., F. J. Haynes, St. Paul, Minn., E. King, 15 William St., N. Y.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) There are none.

4. That the two paragraphs next above, giving the names of the owners, stockholders and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner, and this affiant has no reason to believe that any other person, association, or corporation has an interest direct or indirect in the said stock, bonds, or other securities than as so stated by him. D. O. Haynes. Business Manager.

Sworn to and subscribed before me this 5th day of April, 1918.

(Seal) G. H. Raymond, Notary Public, Kings Co., Certificate filed in N. Y. Co. (My commission expires March 30, 1920.)

ESTABLISHED 1887

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AN ILLUSTRATED MONTHLY PUBLICATION FOR THE DRUG TRADE

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DRUG STORE CONDITIONS IN WAR TIME

In any consideration of the probable effect of the present war upon the pharmacists of the country, a number of questions suggest themselves which will probably remain unanswered for some time to come. The average pharmacist already knows that his calling is suffering by the scarcity of drug clerks who have been called to the colors. The druggist in many localities is also feeling the effect of the scarcity of labor in the ranks of those from which come the help he employs to perform other duties connected with his business, as soda fountain operators, salesmen, porters, etc., help which can be utilized in many directions, but which under the pharmacy laws cannot be assigned to compounding or to selling drugs and medicines. The loss of this unregistered help, while it may be considered a serious handicap, will undoubtedly be met by the employment of individuals who will not be called for military or needed industrial service, and by the greater employment of women.

The loss to pharmacy of the assistance of its registered men, however, is likely to produce a situation that may cause some real hardships. Soda water, cigars, and the goods belonging to the various sidelines carried in the average store, can be sold usually by any one having the qualifications of general clerk or salesman, but no one under the pharmacy laws of the State who has not passed his examinations and received a license can lawfully sell drugs or compound medicines. In a number of localities all of the registered clerks have been called to their country's service, or are about to be called, and the problem now confronting the proprietor is how he shall proceed to fill their places. In his endeavor to do this he may offer the highest kind of wages and arrange for the shortest possible hours of labor to any one having the necessary qualifications, but when the human supply of qualified material is exhausted who will relieve him?

These conditions present serious problems for the retail druggist to consider. The boards of pharmacy under the present laws cannot reduce the requirements so as to permit the registration of untrained or partially trained men or women to serve as assistants, nor would it be wise for the boards to do so even had they the power, for such action would mean retrogression for pharmacy and be against public policy in regulating a business that vitally affects the health and material welfare of the community. As some observers see the situation, should the conditions continue sufficiently long, there is likely to come a lessened number of real pharmacies, where nothing in the main but drugs and pharmaceuticals will be sold, and that to some extent this decline in numbers will be in accord with the theory of the "survival of the fittest." If we follow these thoughts far enough we may be found asking ourselves: Will the general public suffer by a lessened number of pharmacies, and will such a decline in numbers tend to raise professionalism and create more scientific pharmacists?

THE TREND OF ORGANIZED EFFORT

For years June has been a favorite month for holding annual meetings of State pharmaceutical associations, the reason for the selection of this season of the year being quite apparent. The weather during June is usually favorable and well settled, for Spring has been in evidence sufficiently long for Nature to have garbed herself in green, luring the pharmacist away from his four square walls for a brief respite from the daily grind of his calling. The annual meeting also gives him the opportunity to pass a few hours in social intercourse with those imbued with experiences and desires akin to his own, and by embracing it he gives evidence of his interest in humanity and the various social activities of life.

As rejuvenating as the social features of the average annual meeting of the State association are to the average pharmacist, these are really only attractions that serve to give an air of animation to the gathering, and they rarely represent in any degree the work that might and should be accomplished by pharmacists who have so much at stake and so many interests in common. Organization is the keynote of present day experiences, and the world at large is working along this line as it never worked before. What has been accomplished by individual effort in the past has furnished the text for many brilliant chapters in the history of man's achievements, but the trend of the present is in the direction of solidarity of effort.

Viewed in the light of past experience and the movements of the present day, there is every reason why the pharmacist should become a member of his State pharmaceutical association. In the past organizations have always stood for the progress of pharmacy, but to a large extent the real work has been done by the minority. The present calls for greater activities and a united front of the entire pharmaceutical calling in every State. As has been repeatedly said by all observers, more legislative battles have turned out unfavorably to the drug trade through the absence of consolidated effort than for all other reasons put together. There is all the more necessity, therefore, for pharmacists to unite with their State organizations for mutual protection and for the common good. Changing conditions in trade and in the manner of doing business, advances in scientific knowledge and the best results that can be obtained for pharmacy require that this year every pharmacist should make his best effort to co-operate with his State pharmaceutical association and to take an interest in its work.

RECOMMENDATIONS FOR NARCOTIC CONTROL

Pharmacists of the country generally will be interested in a number of recommendations made by the Public Health Committee of the Academy of Medicine and the New York Psychiatrical Society relating to the drug addiction problem. The recommendations are published in a recent number of the *New York Medical Journal*, and according to the editor, "represent a great deal of careful thought." Among them are recommendations that the Federal Government take such measures as are feasible to abolish the manufacture of heroin altogether, and to adopt such legislative measures as will control and regulate the sale and distribution of opium and its derivatives and of cocaine, from the time of its manufacture to the time of its final distribution; also, that it take measures to prevent the importation of these drugs except under proper conditions.

On their face, these recommendations appear to have been made with an intimate knowledge of the working of the present antinarcotic laws, and if they could be incorporated into the statutes and enforced, the problem would be nearer solution. Regarding the cause and frequency of the habit, the Committee provisionally states, that drug addiction formed as the result of long and painful sickness, of painful surgical operations, and as the result of mental causes, etc., constitute at the present, as in the past, a negligible proportion of the total. There is an impression among some that drug addiction is enormously prevalent and is rapidly growing and becoming a serious menace to society, and it is extremely important to find out the truth of this. Figures from the Public Health Service are given showing that about four million grains less of opium were imported into the United States in 1915 than in 1914, and about five million less than in 1913, but this, the Committee adds, may be due to the war.

Regarding the treatment of addicts, the recommendation is made that it only be given in properly organized hospitals or under institutional conditions, for it is the experience and conviction of all that drug addiction can be relieved and cured best in this way. The Federal Government need not take up legislation to deal with this phase of the subject until after a proper study has been made by competent authority, but pending such action, the State of New York should pass some law which will control the matter of drug addiction and the use of drugs by physicians in a better and more practical way than does the present law. As stated by the Committee, the plan at present under consideration is to simplify the present State law and make it mainly supplementary to the present Federal law, and to issue licenses to those physicians who treat drug addicts. As a logical presentation of the narcotic situation as studied by medical men, the recommendations in their entirety are worthy of the consideration of all pharmacists.

Methods of Sterilization for the Pharmacist

The Fundamentals of General Bacteriology and Their Application in Medical and Pharmaceutical Practice

THE introduction into the last editions of the United States Pharmacopoeia and the National Formulary of monographs on sterilization has served to emphasize the importance of a knowledge of this subject by all pharmacists, and the more intimate one becomes with the general principles of bacteriology, the better he is equipped to apply the right kind of methods to the work he has in hand. To acquire this knowledge the student must become acquainted with certain basic facts relating to micro-organisms and the role they play in nature, as also the means by which the work of these organisms may be prevented altogether, rendered ineffective, or utilized for the good of mankind. In this paper it is the purpose of the writer to discuss and define some of the underlying facts on which our knowledge of sterilization is based so that the student and the average pharmacist may better understand the subject as the official standards now consider it.

Micro-Organisms and Their Effects

A large number of important and familiar chemical changes are brought about by certain microscopic bodies which are called micro-organisms. These organisms are living, that is, they have the power to grow, and require food in order to do so; they have the power to reproduce more organisms of the same kind; and they can be killed and rendered inactive by various means. They are extremely minute bodies, invisible except under a strong microscope and they may be either plants or animals. The yeast plant, as used in the making of bread, and the organisms which change cider into vinegar, are illustrations of the action of these small bodies.

Other instances of similar actions are seen in the effects of the so-called "germs." which cause so many diseases, including tuberculosis, smallpox, diphtheria, tonsilitis, decay of the teeth, and lock-jaw. Other names for germs are bacteria, bacilli, micrococci, spirillae, etc. These minute organisms produce within themselves a variety of poisonous substances called toxins, and the latter, circulating in the blood in different parts of the body, set up disturbances which are symptoms of the various diseases. No matter how the bacteria are introduced into the body, there is always danger that harmful effects will follow in greater or less degree; and since the bacteria, or their spores, are present in the air at practically all times, it is sometimes necessary to take steps to prevent the growth of the micro-organisms, and to kill those which are already present. If a few moulds are existing in a syrup dispensed by a pharmacist, only a short time is required until the moulds develop to an enormous extent (unless a large amount of sugar is present), after which the sugar of the syrup may be decomposed, and the whole become sour and stringy. If germs which cause the formation of pus in cuts and other wounds are present in an ointment, or in a solution intended for hypodermic injection, it is obvious that serious results may follow. Therefore it has become the duty of the pharmacist in many instances to get rid of the living bodies which can bring about such dangerous effects in his preparations.

Sterilization

When any substance, such as a solution, powder, or other preparation, has been treated in such a manner that no living organisms are present in it, and none will develop in it if it is kept under proper conditions, the substance is said to be *sterile.* The process of bringing any substance into a sterile condition is known as *sterilization.* This process, formerly neglected by the pharmacist, has, with the increase of medical knowledge, become one of the most important which he has to perform, and it is also one in which the utmost care is necessary at every step.

The means by which sterilization is brought about may be roughly divided into physical methods and chemical methods. All the methods consist in subjecting the preparation to treatment which will be as little injurious to it as possible, while at the same time killing all the same organisms present in it, as well as their "spores." The latter are tiny bodies from which some of the bacteria grow, and which correspond somewhat to the seeds of ordinary plants. And just as ordinary seeds may be subjected without damage to conditions of temperature, dryness, and so on, which would soon kill the plants, so the various bacteria spores and mould spores may remain "alive" and ready to develop, after being put through processes which have killed the full-grown organisms. Hence, sterilization to be complete, must include destruction of all spores, in addition to the destruction of the larger bodies.

Methods of Sterilization

It has been found that all micro-organisms are killed, and their spores destroyed, by a sufficient exposure to heat, either dry or moist. In general, the temperature required is at least that of boiling water, 100° C., but it is customary, for safety's sake, to use higher temperatures. If dry heat is used, the temperature should be from 160° to 170° C., and should be continued for two hours. If steam is used, under ordinary pressure, the temperature is of course 100°, but on account of the greater penetrating power of steam, it is nearly as efficient as dry heat at a much higher temperature. By using steam under pressure, higher temperatures are available, and the time of sterilizing may be reduced. The use of heat is the most common method of sterilization to day.

Another physical method depends on the fact that, since bacteria, etc., are of appreciable size, at least one thousandth of a millimeter long on the average, they may be filtered out of solutions containing them. Naturally the filter must be one with extremely fine pores, in order to retain such minute particles, and no substance has proved to be efficient for the purpose of removing microorganisms except unglazed porcelain or stoneware. Filters made of these two materials are called, from the names of their inventors, Berkefeld or Chamberland filters. They are usually made in the form of hollow cylinders, closed at one end, and having the opening fitted with a metal outlet. The solution is forced through the filter by air pressure.

Still another method is that in which dry heat is employed. The apparatus used is an oven or similar device, in which a temperature of from 160° to 170° C. is to be maintained. The objects to be sterilized are thoroughly cleansed, dried, and placed in the oven for at least two hours, in most cases. In order to allow the sterilized object to be handled afterwards without contaminating it, it may be wrapped in parchment or other strong paper before being placed in the oven.

The objects which are customarily sterilized by the method of dry heat are glassware, including bottles, funnels, Petri dishes, test tubes, and ointment jars; also collapsible tubes for ointments, and other metallic apparatus. The method may also be used for any material which is not injured by the high temperature employed. Many oils, ointments which do not contain volatile constituents, dry powders, such as talc and zinc oxide, china clay, some bismuth salts, etc., are to be sterilized by this method. Slight modifications are necessary in certain cases. Glycerin and its solutions, for instance, will not withstand two hours' heating without decomposition. They are therefore heated to 150° C. for thirty minutes. Petrolatum and fixed oils are heated, either in the oven or on a sand bath, to 200° C., and then at once removed from the heat, and cooled in sterile surroundings. When volatile constituents are present, as in camphor liniment, the preparation should be put in a strong bottle with a tightly fitting stopper, which is fastened in securely, and the whole heated to 120° C., in an oven or a suitable bath of saline solution.

Another means of applying dry heat, which may be used for small objects, consists in "flaming" them directly in a Bunsen burner flame. Platinum wires, small pipettes, tweezers, metal funnels, the necks of bottles and test tubes, and other bodies, are thus sterilized by drawing them rapidly a number of times through the blue flame of a burner. If the object is of glass, a little skill is necessary to prevent the glass from cracking in the heat, while at the same time permitting it to become sufficiently hot to destroy all organisms.

Moist Heat and Steam

For this method of sterilization, a variety of apparatus has been devised, all of which consists essentially of a chamber with suitable shelves, and provided with a steam-tight door. Steam is introduced from a small boiler beneath the apparatus, or from a steam pipe. This type is familiar to all in the form of the sterilizers seen in barber shops, used for sterilizing towels. If the material under treatment will permit it, the heating is continued for from thirty minutes to an hour, while more sensitive preparations must be sterilized by "fractional sterilization." In the latter method, the objects are heated in live steam for fifteen minutes on each of three successive days. Fractional sterilization has the added advantage that it destroys all spores which are present, and which might have escaped the first sterilization. In the intervals between the several heatings, these spores have time to develop into full-grown organisms, which are easily killed.

Moist heat sterilization may be used for a great many pharmaceutical preparations, especially those which are of an aqueous nature, as eye washes, syrups, gargles, lotions, etc.

Since solution is aided by high temperatures, it usually happens that if an aqueous preparation is sterilized as described above while contained in a bottle or other container of ordinary glass, the latter is attacked strongly by the solution, with the formation of silicic acid, which appears when sterilization is finished as small scales or flakes in the solution. For this reason all glass containers to be used in moist sterilization are best made of some of the various forms of "non-soluble" glass, which is very resistant to solvent action. In any case, the glass containers should be rinsed out before sterilization is begun, by means of dilute (about 0.3 per cent.) hydrochloric acid, to neutralize the alkali on the surface of the glass. The bottles are then washed thoroughly with distilled water to remove all traces of the acid. If this is done, moist sterilization may be employed for a number of alkaloidal solutions and other organic compounds which are affected by alkalies.

Steam Under Pressure

This efficient form of sterilization is used for large scale work in factories, especially for bandages, gauzes, and other surgical dressings. It is carried out in a steam-tight vessel called an autoclave, where steam under a pressure of one atmosphere (fifteen pounds to the square inch) produces a temperature of about 115° C. One heating for fifteen minutes under these conditions suffices to kill all life. Naturally, the process is a powerful one, and the materials to be sterilized by it are those which will not be injured by the high temperature and pressure.

Pasteurization

This term is used for sterilization at a comparatively low temperature, and is used for materials which are very sensitive to heat. It is carried out in the same manner as "fractional sterilization," except that the temperature used is from 60° to 70°

C., the time of exposure being from 30 to 60 minutes. Pasteurization is used for milk, organic compounds, and sensitive alkaloidal solutions.

Working Under Sterile Conditions

A solution which has been sterilized may be instantly spoiled, so far as its sterility is concerned, by allowing it to come in contact with any object whatever which is not sterile. Bottles of sterile solutions should be closed with sterilized rubber (never cork) stoppers, which have been boiled for 15 minutes in 5 per cent carbolic acid solution, rinsed with boiling water, and kept in alcohol until used. The stoppers must be handled with tweezers which have been sterilized in a flame. If tight closing of the bottles is not required, a plug of sterilized cotton will effectually prevent the entrance of micro-organisms, and such a cotton plug is the most usual form of temporary stopper for sterilized solutions. If an ointment or other preparation is to be made sterile, it sometimes saves time to compound it under sterile conditions, and omit sterilization of the finished product. In order to produce a preparation under sterile conditions, the following precautions are absolutely necessary:

All water used must be freshly distilled, and sterilized by boiling for half an hour in a flask, closing the neck of the flask with a plug of cotton, which is allowed to remain in place after the boiling is concluded. Every piece of apparatus which will come in contact with any ingredient of the preparation must be sterilized, and this includes graduates, scale pans, spatulas, funnels, dishes, test tubes, filter papers, mortars and pestles, bottles, jars, tubes, and stoppers. The entire operation of compounding the prescription should be carried out in an enclosed space, such as a large sheet iron box or large glass case, with a door in front for admitting the hands, etc. This enclosure should be sterilized by direct flame, by alcohol or chloroform, or other strong disinfectant. If such a cover is lacking, a cloth moistened immediately before use with 5 per cent. phenol solution is stretched on a frame, and the work carried on under it. Even with the greatest care possible, such work results only in approximate sterility, and wherever practicable, the finished preparations should be sterilized by one of the methods described above.

Sterilization by Chemical Methods

A large number of substances have the power to kill all micro-organisms with which they come in contact, or to prevent the further growth of such organisms. Substances of the first kind are called disinfectants or germicides; those of the second class are antiseptics. In pharmaceutical work, it is generally not permissible to use disinfectants for sterilization, as the quantity required is apt to be too great, but disinfectants and antiseptics are of great aid in promoting sterilization, and especially in maintaining a sterile substance in that condition. They are also used for the sterilization of the hands, certain apparatus, especially large bottles, carboys, etc., and for the preservation of vaccines, serums, and other similar substances.

It is impossible to do more than mention some of the more useful germicides. Carbolic acid, in 5 per cent solution, is very effective, and is largely used. Cresol solution is even more powerful. Alcohol, especially of 70 per cent. strength, is an excellent sterilizer, and may be used on almost any apparatus or any material which it does not dissolve. Chloroform resembles alcohol in its disinfectant properties, and a few drops of it in a solution prevent the growth of organisms. Bichloride of mercury, in solutions of about one part in one thousand of water, is quite useful, but must never be used on metallic objects, since it immediately corrodes them. Mineral acids, even when quite dilute, are powerful disinfectants. Free iodine, chlorine, and bromine, as well as hypochlorites and hypobromites, are also fatal to any bacterial life. Formaldehyde is efficient in very small quantities, but can rarely be used in pharmaceutical preparations on account of its odor and taste, and great chemical activity. A number of the volatile oils, including pine, peppermint, anise, clove, cinnamon, etc., have some value as disinfectants. As preservatives, to prevent the growth of fungi and moulds, boric acid, borax, benzoic acid, salicylic acid, thymol, camphor, salol, and betanaphthol may be mentioned.

CLEARING THE WAY FOR PHARMACY*

By **H. B. McWILLIAMS, Sun Arbor, Mich.**

IN an address to the South Dakota Pharmaceutical Association last August entitled, "Facing the Facts," Dr. James H. Beal called attention to the great change which has taken place in pharmacy from 1842 to the present time. In his address he said, "the former compounder and dispenser of medicinal preparations has become a person whose income is largely derived from the supply of articles having little or no connection with the sick." He further adds that, "the prescription business unless it be the dispensing of a ready compounded or proprietary preparation is gradually becoming a lost art except in a few favored localities."

Further in his address Dr. Beal indicates some of the causes for this change to have taken place and seems to view with favor the transition from professional to commercial pharmacy where sidelines—soda fountains, cameras, magazines, and cigars, etc., have more value in the store than the prescription and drug departments. In conclusion he says, "Let us for once and all get rid of the fantastic and snobbish notion that so called 'professional' pharmacy is the only kind worth cultivating. Let us frankly acknowledge that commercial pharmacy has a legitimate place and purpose in the social economy and then let us devote the best that is in us to make it ethical, respectable and profitable. Let us face the facts."

Let us then as he says face the facts. It cannot be denied that there has been a tendency for professional pharmacy to become commercialized but certainly the ideal of allowing the change to continue must be severely questioned.

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*Read before the Prescott Club and contributed by the author.

Men who have been trained for three or four years in state universities such as we have here and having the high ideals of pharmacy that such a training must instill cannot passively accept such conditions. On the other hand men who have had their training in smaller independent schools whose sole aim is to get men and teach them only enough to pass state boards, those men welcome the change and through their blissful ignorance of the aims of the true profession of pharmacy, are steadily digging the pit into which they will fall. If our profession is to require no more training than that we should, in justice to the other arts which are classed as professions, law, medicine, etc., cease to give ourselves that title and allow Dr. Beal to record another drop in our progress by becoming merely licensed store keepers.

But this thing must not and will not happen. Conditions must be changed either for or against the inroads of commercialism into professional pharmacy and let us without question make the change at once. The change must be made in favor of the professional pharmacy and the gradual elimination of the too commercialized stores.

There are two ways to remedy such evils. They are force or legislation, and persuasion or education. As Dr. Beal showed in his address that legislation was futile to restore pharmacy to the professional basis we will turn to education.

This will be a slow but nevertheless a sure process and men who take the stand of professional against commercial pharmacy will be those whose training has been such that they will see the future good and not the present worth and thereby work with patience.

How then should this progress through education be made? Not, as has been suggested, by the introduction of more commercial courses in the colleges and schools, unless those courses have some bearing upon economic conditions of trade and commerce. The commonly known commercial courses which treat of window dressing, keeping accounts, etc., have already proven the stepping stones by which the profession has been lowered.

Let us, before giving the remedy, diagnose the case. Our ideal pharmacist is today, as he was in the early times, essentially a maker and a dispenser of medicines and drugs. At the present day the physician has partially taken over the role of dispenser and allows the pharmacist only to make the medicines. This we must admit is one thing in which professional pharmacy has lost ground. Physicians dispense their own medicines both for the money gain and for the reason that pharmacies, which have degenerated into drug stores, have lost so much of the doctor's confidence that he does not wish to trust them with his prescriptions. One bad drug store can blacken the eye of a dozen good pharmacies. A pharmacy whose prescription department is superintended by a man who thoroughly knows drugs and medicines and their proper dispensing will have no accumulation of dust on mortars and pestles.

This knowledge, then, being necessary for a good prescription business, it follows that we must know drugs, medicines, and their dispensing, and must know them better than the physician knows them. When medical men come to appreciate the value of the pharmacist as an aid and advisor in the matter of preparing and administering medicines in their proper dosages for the treatment of disease, the professional pharmacy will have made a great step forward.

Let us then, put more and more stress on these things in our schools and on the state board examinations, raising the standard of what a pharmacist should know to such a height that only the best trained man can become a true licensed pharmacist. And let those whose ambitions do not run so high conduct their soda fountains, sell their cameras, cigars, etc., but not under the name of a pharmacist.

The facts must be faced and action must be taken. The salvation of professional pharmacy does not lie alone with the schools and colleges of pharmacy as I might have indicated. Every pharmacist must decide where he stands on this question and having decided, he must stand by his beliefs. Retail pharmacists who favor the advancement of professional pharmacy and the decline of the commercialized pharmacies must make every effort to better the condition of their drug and prescription departments, gain the confidence of the physician, and should not tolerate the sale of poor or substituted drugs.

Pharmacists who are in the manufacturing line should likewise heed the signs and always be alert to keep up the quality of the medicines they make, or the drugs they handle, and keep pace with the new discoveries in medicine.

These are the conditions and the remedy.

NEW NARCOTIC RULING

We are informed that the Internal Revenue Bureau of the Treasury Department has notified its collectors and agents that the sale of unclaimed freight or express packages containing narcotic drugs, by officials of railways and express companies, at public auction, to unregistered persons, except officials of Federal, State or municipal governments specifically exempt under Section 1 of the Act of December 17, 1914, is a violation of that law.

When a sale of such packages is to be made, points out the Commissioner of Internal Revenue, the collector of the district should be notified by the railway or express officials a sufficient length of time in advance of the sale to permit the detail by the collector of an officer to inspect all unclaimed packages to be sold and identify such as contain narcotic drugs. An internal revenue officer must be present at the time of the sale to see that the packages containing narcotic drugs are sold to those persons only who are registered under the Federal law, or to officers of the Federal, State or municipal governments exempt from its provisions.

The registered person securing narcotic drugs through such sale must, at the time of purchase, make a supplemental inventory, in duplicate, of the drugs coming into his possession; retain the original for file with his order forms, and forward the duplicate to the collector.

Notes on Crude Drugs for Manufacturing

By R. C. STOFER

MUCH information relating to what pharmaceutical manufacturers are doing to win the war and other facts arising from the scarcity of certain drugs were brought out at the April meeting of the New York Branch of the American Pharmaceutical Association, when the representatives of a number of such houses presented a resume of their individual experiences and work during the preparatory period of the war. Many of the facts brought to light were reported in the Era's account of the meeting on page 135 of the May Era, but the following notes abstracted from the address of Mr. R. C. Stofer, president and general manager of the Norwich Pharmacal Company, presented at that time, were reserved for publication in the present issue. Mr. Stofer after referring to the problems with which his house had to cope, took up the following drugs:

R. C. Stofer

Digitalis: The leaves were formerly obtained from European sources exclusively, and oftentimes were poorly prepared for the market, the leaves brown and occasionally mouldy. They are now procured from Virginia and the Pacific Coast, particularly Oregon. Through the intelligent direction of their collection and preparation for the market, American growers have succeeded in supplying digitalis much superior to the European article. We have received American grown digitalis, which tested nearly 2½ times the U.S.P. standard. Experiments, have been conducted with a view of determining the best physiological method for the estimation of the strength of digitalis preparations. Comparative tests are now being made by the one-hour frog method, the 12-hour frog method, the cat method of Dr. Hatcher, and also the guinea pig method. It is hoped from the results of these experiments that a definite, scientific conclusion may be drawn as to which is the best method for testing digitalis and its preparations.

Mexican Scammony: Owing to the world war, true scammony became unobtainable in commercial quantities. Experiments, both chemical and physiological, have been made, with the resin obtained from true scammony and from Mexican scammony. From the results of experimental work, data is now in the hands of the Pharmacopoeial Revision Committee who have been requested to permit the use of Mexican scammony as a source of scammony resin, as is done at the present time by the British Pharmacopoeia.

Aconite: It has been definitely shown, by many investigators, that the present chemical method for the assay of aconite and its preparations is entirely unsatisfactory, as the results obtained do not indicate the therapeutic activity of the drug and its preparations. Experiments are being made, looking to the isolation of aconitine from benz-aconine and aconine, as it is claimed that these two alkaloids are not therapeutically active, to any great extent. Much research work is being performed upon the physiological method in an endeavor to improve the new semi-official guinea pig method of the Pharmacopoeia.

Belladonna Leaves: The leaves of Hungarian and German growth formerly received were oftentimes brown, of low assay, probably due to improper collection and preparation for the market. Much attention has been given in various sections of the United States to the cultivation, upon a commercial scale, of belladonna, and the American growers have been quick to grasp the advantage of high assay. By efficient methods, proper selection of seeds from high-assay plants, etc., belladonna has been produced in this country assaying as high as 0.8%, or nearly three times the assay of the average European leaves. We now purchase by preference American grown leaves as against good quality, cultivated French leaves which reach the country in goodly quantities.

Hyoscyamus: Before the war, Russia was the principal source of supply, but the drug was notorious for its low assay, and its generally poor physical condition, making it practically impossible to obtain an article complying with the pharmacopoeial requirements, except for occasional small lots of cultivated drug, which came from England or Germany. America is making slow progress with the production of hyoscyamus, as successful cultivation is conceded to be difficult; however, Michigan, Maryland and Virginia produced limited quantities of this drug last year, which assayed about three times the U. S. P. standard. Therefore, we are confident that in time the American drug will be available in greater abundance. The scarcity of belladonna and hyoscyamus led to many experiments with combinations in pill and tablet form, in which stramonium was used in place of belladonna. As a result of clinical investigation, it was demonstrated that in many cases stramonium was entirely satisfactory to the medical profession.

Stramonium grows abundantly in many sections of the country, but prior to the war, was collected only in a limited way. The cheaper labor abroad made it more profitable to import supplies from Europe than to purchase here. Now, however, the collection in this country is enormous and manufacturers are entirely independent of outside sources. Generally speaking, American stramonium, though not cultivated, is of higher assay than the European article.

British Pharmacy in War Time

Important Emergency Alterations in Official Formulas Made to Conserve Oils and Fats Described by Era's London Correspondent

More Changes in the British Pharmacopoeia

IN a second time since the war, some important emergency alterations have been made in the British Pharmacopoeia. Last time, you will remember, the changes were due to the necessity of conserving our supplies of sugar and glycerin, and all preparations containing either of these was affected. The second change, which has just been made, arises out of the necessity of husbanding our supplies of olive oil, lard and suet. As you know, the principal producing countries have placed an embargo on the export of olive oil and consequently, the quantity available for use here is reduced to small dimensions and the price has risen to very high figures. Therefore the General Medical Council, whose authority over the British Pharmacopoeia is supreme, has ordered that liniments which have hitherto been made with olive oil may now be made either with arachis oil or sesame oil, while ointments and other preparations that were formerly made with lard or suet may now be made with lanolin either separately or mixed with vaseline or hard paraffin in sufficient proportion to give the desired consistence and appearance. The General Medical Council has also decreed that a second quality castor oil may be used instead of the best. None of these changes is likely to cause any trouble, but it might have been better had definite bases been laid down for each of the ointments, and had it been ordered which of the liniments should be made with arachis oil and which with sesame oil. As every pharmacist knows, uniformity in dispensing is very desirable and saves a lot of explaining to clients; as it is a prescription will be dispensed in one way at one store and in another at the next, with the consequence that the client may think a mistake has been made. With just a little extra trouble this might have been avoided.

The Apotheosis of Women Pharmacists

For the first time in the long history of the Pharmaceutical Society, a woman pharmacist has accepted nomination as a candidate for election to its council. The lady in question is Miss Margaret Buchanan, the founder of the Women Pharmacists' Association and of the Women's School of Pharmacy. Miss Buchanan is also part proprietor of a large drug store, her partner being another lady pharmacist. It is not many years ago that women began to enter the ranks of pharmacy in any considerable number, and it does not seem long since women were regarded as ineligible even for membership of the Pharmaceutical Society; now there is a poor prospect of a woman becoming a member of the governing body. It goes without saying that at this stage of the war there are more women students of pharmacy than men in this country, and there can be little doubt that even after the war the number of women students will continue to increase. The majority of the women pharmacists are engaged as dispensers, but the tendency of women to open new stores of their own is becoming more pronounced.

The P. S. & The P. A. T. A.

The Secretaryship of the Pharmaceutical Society has been vacant owing to the resignation of W. J. Uglow Woolcock who has been appointed to the important position of manager of the recently formed British Chemical Manufacturers' Association. It is understood that the new Secretary of the Pharmaceutical Society will be W. S. Glyn-Jones, the founder and present secretary of the Proprietary Articles Trade Association. There is, however, a feeling in some quarters that it would be a grand mistake to build up the Pharmaceutical Society which should stand for all that is highest in pharmacy, with the P. A. T. A., which is solely concerned with the question of the prices of proprietary articles. It is felt in these quarters that if Mr. Glyn-Jones becomes secretary of the Society, he should give up his connection with the P. A. T. A. On the other hand, there is a large section of the pharmaceutical community which sees no harm in having a common secretary for these two bodies, and this section will probably carry the day.

The Army Pharmaceutical Service

The question of the reforming of the Army Pharmaceutical service is now being considered by the Royal Army Medical Corps and a conference has just been held between representatives of this body and the Pharmaceutical Society. Numerous letters that have been received by the Society provide evidence of the need for reform, and in order to investigate the matter more fully, Mr. W. S. Glynn-Jones paid a ten days visit to the armies in France and a deputation from the Society visited the units in this country. A full report of their visits together with a digest of letters from pharmacists serving with the colors was submitted to the R. A. M. C. The Society's Council is now awaiting the result of its representations.

Pharmaceutical Librarian for 52 Years

The death has just occurred of J. W. Knapman who, for 52 years, was librarian to the Pharmaceutical Society of Great Britain. This is probably the finest library of the kind in the world, comprising some 15,000 volumes on pharmacy; it contains a fine collection of old herbals, early pharmacopoeias and valuable editions. Mr. Knapman had been in the Society's service for a longer period than any other man. He assisted in the compilation of the first pharmaceutical reports.

THE QUESTION BOX

The "How to Do It" Department

CONDUCTED BY PHARMACEUTICAL EXPERTS

For the benefit of ERA Subscribers

Propylic Ether

(A. J. de M.)—In the main propylic ether is of scientific interest only, being used in the laboratory in organic chemistry for showing the relationship between the alcohols, ethers, aldehydes, and in the synthesis of other compounds. So far as we can recall it has no particular pharmaceutical, or medicinal use. Reference to handbooks on organic chemistry show that three ethers of the propyl type have been prepared in the laboratory; propyl oxide or dipropyl ether, $(C_3H_7)_2O$, which is a colorless liquid smelling like common ether and boiling at 85-86° C., obtained by Chancel by heating a solution of caustic potash in the alcohol with propyl iodide; methyl propyl ether, obtained in a similar way, as a liquid boiling at 49-52° C., and said to possess analogous properties to common ether; and ethyl propyl ether boiling at 63-64°. None of these ethers appear to be of commercial importance, nor are they to be found listed in market lists of manufacturers. It is possible that a manufacturer could be found to make some for you on special order.

Manufacture of Glucose from Straw

(C. R. B.)—We can find no reference to a practical process for making glucose from straw in any recent literature at our command. Of course, it is theoretically possible to make glucose not only from starch, but also from any carbohydrate having the same formula, as cellulose (sawdust) which, as well known, is the principal constituent of the cell-membranes of all plants, and therefore would be found in straw. Commercially, however, glucose is made by the hydrolysis of starch, the source of which in this country is corn. In the manufacturing process the embryo is removed from the grain by mechanical means, the residue being then treated with sodium hydroxide to remove gluten and albuminous matter naturally found in the corn; the resulting starch is then purified by treatment with sulphuric acid which is subsequently neutralized by chalk or marble dust, the various steps depending somewhat on the manufacturer's method of reducing the details to practice. Pure glucose occurs in the form of anhydrous hard crusts or in fine powder, and is also known as "dextrose," "pure grape sugar," etc. A solid glucose is found in commerce in crystalline masses or lumps containing 12 to 14 per cent. of water, and is said to consist of about 60 per cent. of dextrose with an unfermentable dextrin-like substance called gallisin. Commercial liquid glucose as usually met with is a clear, viscid, almost colorless and odorless syrupy liquid, with a sweet taste, and consists chiefly of dextrose, some dextrin being present along with variable percentages of unfermentable carbohydrates. The U. S. Pharmacopoeia defines official glucose as mixture of dextrose and dextrins. According to the National Standard Dispensatory, however, the term "glucose" is commercially applied to the saccharine product obtained by the inversion of starch, and more particularly to the liquid syrupy form, while to the solidified product the term grape sugar is applied."

Soluble Tincture of Tolu

(G. G. G.)—"I cannot locate a formula for fluid extract of tolu soluble for syrup in the dispensatory or National Formulary. Please give a formula in which glycerin is used and one from which glycerin is omitted?"

So far as we can recall offhand, no formula for "fluid extract" of tolu, soluble, has been published. However, previous editions of the National Formulary contained a formula for "soluble tincture of tolu," which produced a preparation to which syrup or water might be added without resulting cloudiness. It is as follows:

Balsam of tolu..............	3 troy ounces
Magnesium carbonate......	145 grains
Glycerin	12 fl. ounces
Water,	
Alcohol, of each,	
a sufficient quantity to make..	32 fl. ounces

Mix 6 fl. ounces of alcohol with the glycerin, and dissolve the balsam of tolu in the mixture with the aid of heat, avoiding loss by evaporation. Next add 12 fl. ounces of water, and allow the mixture to become cold. Pour off the milky liquid from the resinous precipitate (which latter is to be rejected), mix it with the magnesium carbonate, by trituration, and filter. Lastly, pass enough of a mixture of one volume of water through the filter, to make the whole filtrate measure 32 fl. ounces. As stated by the N. F., 3rd ed., this preparation may be added to syrup or water without producing cloudiness. It also states that 1 fl. ounce of the preparation with 15 fl. ounces of syrup yields a product which may be used as syrup of tolu in all cases where the official preparation is not required.

Another preparation used for the extemporaneous preparation of syrup of tolu is the solution of balsam of tolu of the British Pharmaceutical Codex, which is made as follows:

Balsam of tolu.................	2 ounces
Alcohol	6 fl. ounces
Distilled water................	13 fl. ounces

Dissolve the balsam of tolu in the alcohol, and add the solution to the distilled water at a temperature of 70° C.; shake vigorously, set aside for 24 hours, and filter. It is stated that this preparation is liable to deposit crystals in cold weather, but they will dissolve in the liquid if the bottle containing it be removed to a warm place. This preparation is used to make a syrup of tolu which is more aromatic than the official B. P. "syrupus tolutanus," one volume of the solution being diluted with seven volumes of syrup. This preparation is not a "fluid extract," and contains no glycerin, but it may answer your purpose as an alternative formula should the one taken from the N.F.III be unsatisfactory.

Technical Uses of Calcined Magnesia

(A. K.)—We cannot give without considerable investigation the names of possible users of technical oxide of magnesia of the character you describe. However, we find that calcined magnesia containing at least 85 to 90 per cent. of magnesium oxide, and not more than 4 per cent. of calcium oxide, is used to a considerable extent in making magnesia cements, dielectric or insulating materials, artificial stone, etc., while a grade is used for metallurgical purposes (refractory materials), the kind employed calling for at least 90 per cent. of magnesium oxide, the presence of ferric oxide, manganese oxide, lime, alumina and silica up to 10 per cent. not being objectionable.

According to technical literature, a number of the so-called "sanitary floorings," exploited under various trade names, consist principally of magnesia cement, made directly from calcined magnesia. Magnesium oxide is also used in making patent hollow magnesia vessels and crucibles, the latter, as they can not be handled at a white heat, being used as a lining to graphite crucibles. It is also used in the rubber industry, for making waterproof stone, etc. While this information does not directly answer the question, it suggests a clue to the possible technical uses of calcined magnesia.

Perfume versus Toilet Water

(X. Y. Z.)—"How strong is perfume as compared with toilet water? How much water and how much cologne spirit would have to be added to 1 ounce perfume to be equivalent to how much toilet water?"

The difficulty in answering this question is that the querist does not tell what he means by "perfume," and dictionary definitions throw but little light on the subject. Thus we are told that a "perfume is a substance that emits an agreeable odor; specifically, a fluid preparation, as of the essence of flowers, used for scenting." On the other hand, a "toilet water is a perfumed liquid used in the toilet, a cologne or Florida water." This goes to show that the terms "perfume" and "toilet water" are used interchangeably, and unless some other explanation is forthcoming, the application of the terms is misleading. From the dictionary definition we can conclude that a toilet water is a perfume, but in practice it does not always follow that all perfumes are toilet waters. From the second question we assume that by "perfume" is meant one of the ordinary "extracts," which is usually a solution of aromatic substances in alcohol, the solution being made as concentrated as possible and in this form it finds application in the manufacture of handkerchief extracts and of certain odors bearing specific names.

As is well known, toilet waters, as found in the market, are not, as their name would indicate, waters, but solutions of essential oils or odorous principles in alcohol or a partly alcoholic liquid, prepared either by solution or distillation. Comparing this general definition with that stated for an extract, the distinction between the preparations would be mainly one of concentration, but as no standards are given for the preparation of either, the strength of one can not well be expressed in equivalents of the other. Usually the so-called colognes are fragrant compounds of much less strength and permanence of odor than the extracts; they are often sold under the name of toilet waters, and to a large extent, one perfumer tells us, they take the place of the cheaper grade of "perfumes" formerly sold. We are also informed that colognes may be prepared from these handkerchief extracts, which also vary in their degree of concentration as produced by the various manufacturers, the strength of toilet water from such an extract being entirely regulated by the amount of cologne spirit added and the judgment of the compounder.

Fenner states that for second grade perfumes, take handkerchief extract 1 part and cologne spirit 1 part. For third grade perfumes, take handkerchief extract 1 part, cologne spirit 2 parts, and for colognes, use the following general formula: Handkerchief extract 1 part, cologne spirit 3 parts, and distilled water, a sufficient quantity. If rose water or orange flower water is added instead of distilled water, the product will be improved. Rose water may be used with all extracts, but orange flower water is preferred in those compounds which contain triple extract orange flowers or essence of neroli. Mix the extract with 2½ parts of the cologne spirit, and add water gradually until, when shaken up, it remains after standing a short time, just a trifle cloudy or milky, then add the balance of the cologne spirit, and set away for a month or more before using. Assuming that your "perfume" is an "extract" of the type given in this general formula, you will have a possible basis for comparison between the strength, i.e. odoriferous content of an extract and the corresponding strength of the cologne or toilet water made from it. As has been said, no standards have yet been established for perfumes, and the ordinary fabricateur of odors is likely to employ his judgment and preference for the particular combinations that will produce the perfumes most to his liking.

Bordeaux Spray for Potato Plants

(E. P. B.)—Bordeaux mixture consists of a combination of copper sulphate and lime with water, the formula varying somewhat according to the use which is to be made of the spray. The standard or so-called "6-4-50 formula" is as follows:

Copper sulphate................	6 pounds
Fresh lime.....................	4 pounds
Water, enough to make.........	50 gallons

Dissolve the copper sulphate in 4 or 5 gallons of water, using a wooden or earthen vessel. In a separate vessel slake the lime and rub until all the lumps are broken. Then strain and stir slowly into the copper sulphate solution. This mixture is to be diluted and used as soon as possible, some authorities stating that it loses its effectiveness after standing more than a day or so.

Various experiment station authorities state that this is the best remedy for fungous diseases, but it should not be applied while the trees are dormant or as the fruit is ripening. To use on potato plants as a general treatment for blight and "bugs," begin spraying the plants with Bordeaux mixture to which Paris green or arsenate of lead has been added at the time when the bugs first appear, or when the plants are about 8 inches high, and repeat about every two weeks as long as the plants are growing. Spray often in warm, muggy weather; fewer sprayings are necessary in dry weather. To prepare the Bordeaux mixture for potato plants, proceed as above, and then add ½ pound of Paris green or 2 pounds of arsenate of lead. Some authorities recommend the addition of arsenate of soda in place of Paris green or arsenate of lead. In some localities the addition of arsenate of lead is preferred, as when the mixture is properly prepared the application does not easily injure the foliage. The mixture can be applied with any of the usual spraying devices.

The general treatment recommended for the potato scab is to soak the uncut tubers for two hours in 30 gallons of water and one pint of solution of formaldehyde (formalin). This solution can be used several times. Do not put treated tubers back into crates or bags that have held scabby potatoes. Make the treatment only a few days before planting if possible. Do not plant upon land that has recently grown crops of scabby potatoes or beets.

Calamine Lotion

(B. D. Co.)—Various formulas for "calamine lotion" are extant, the following, which is typical of most of them, being taken from the British Pharmaceutical Codex:

Prepared calamine	2 ounces
Zinc oxide	1 ounce
Glycerin	1 fl. ounce
Rose water, diluted, enough to make	20 fl. ounces

Triturate the calamine and zinc oxide with the glycerin, and add the rose water.

A variant formula consists of the incorporation of lime water, as follows:

Prepared calamine	4 drams
Zinc oxide	2 drams
Glycerin	4 drams
Lime water	4 fl. ounces
Rose water, enough to make	8 fl. ounces

Triturate the calamine and zinc oxide in a mortar with successive portions of lime water; decant the silicious matter, then add the glycerin and rose water.

Calamine lotion is employed as a mild astringent and soothing lotion for the skin in eczema and acne; also, to remove roughness and redness due to exposure.

St. John's Bread; Ceratonia Siliqua

(A. J. de S.)—St. John's Bread, *Ceratonia siliqua*, is imported into this country by various concerns, principally from the countries bordering on the Mediterranean, although it is cultivated in various sub-tropical regions. Just at the present time the prevailing quotations in this market are somewhat nominal. The consumption in this country, we are informed, is not very important commercially, the principal demand being in centers where there is a considerable foreign population, its principal use being as a laxative and demulcent. Dr. O. A. Wall, in his recently published "Handbook of Pharmacognosy," states that it is "occasionally used in pectoral teas, etc.; sometimes imported as food for cattle, but in the drug stores it is used mainly as laggniappe."

St. John's bread, also variously known as "sweet pod," "honey bread," "locust bean," "carob tree bean," etc., is the dried fruit of *Ceratonia siliqua*, a good-sized tree, native of the Mediterranean region and cultivated in a number of warm countries. Tradition connects it with the locust which fed St. John the Baptist, hence the name. It is also thought by some that this tree furnished the "husks" to which reference is made in the parable of the Prodigal Son. Various travelers state that the Arabs make a preserve like tamarinds of the pulp of the fruit, which is gently aperient. The produce is said to be extremely abundant, some trees yielding as much as 800 or 900 pounds of pods. The wood is hard and much valued, and the bark and leaves are used for tanning.

The fruit is described as being from 10 to 20 Cm. (4 to 8 inches) long, nearly 25 Mm. (1 inch) broad, and about 3 or 4 Mm. (1-8 to 1-6th inch) thick, being obtuse, linear, much flattened and with somewhat elevated edges, causing the transverse section to be narrowly and obtusely rectangular. The epicarp is leathery, brown, glossy, finely striate, and encloses a light brown softer sarcocarp of a pleasantly sweetish taste. The seeds, 6 to 12 in number, are flattishly ovate, and polished brown, and are contained in separate transverse cells formed by the papery inner layer of the pericarp. The fruit contains 40 to 50 per cent. of cane and grape sugar, besides mucilage, protein compounds, a little tannin, and butyric acid, to which the odor is due. Some writers affirm that the seed of this fruit furnished the original carat weight of the ancient jeweller, an assertion which has been denied by others. This connection, however, is principally interesting as showing the tendency to enhance many of the qualities ascribed to the locust bean in Oriental literature, a reputation which is not warranted when the drug is judged by modern usage in the United States.

Cheap Liquid Soap

(A. E. S.)—Most formulas for the preparation of liquid soap to be used for cosmetic and lavatory purposes call for alcohol as a necessary constituent, and it would be difficult to conceive of a preparation of this character which contains none of this solvent. Of course, the quantity of alcohol, as well as glycerin, could be lessened in any standard formula, but to what extent this could well be done in a given preparation would have to be worked out by experiment. However, here are two formulas which have been recommended for commercial compounds of the type you name:

White castile soap	4 ounces
Alcohol	4 ounces
Oil of bitter almonds	1 fl. dram
Oil of sassafras	2 fl. drams
Water, enough to make	16 fl. ounces

Reduce the castile soap to shavings, dissolve in the alcohol and water, and add the oils. After allowing the mixture to stand for some time, filter clear. Other curd soaps may be used in a similar manner for making liquid soaps. The formula just given produces a somewhat dilute alcoholic solution of castile soap, but when prepared in the manner directed the resulting preparation is said to be the best and most efficient of any of the liquid soap compounds.

Gathmann ("American Soaps,") states that by using a glycerin soap, such as is found on the market, a so-called liquid glycerin soap can be easily prepared. Take glycerin soap, 4 ounces, water, 12 fl. ounces, and alcohol, 2 ounces. Dissolve the soap in the water heated to about 160° F., and add the alcohol. When cold, filter and add through the filter enough water to make 16 fl. ounces. Of course, the kind of glycerin soap employed affects the character of the resulting product, owing to the differences in specific gravity and alkaline constituents of the glycerin soaps sold as such in the market. To produce a transparent preparation of this type, a medium quality of glycerin soap should be selected. In order to maintain a fair degree of liquidity in chilly weather, the liquid soap should contain a certain proportion of alcohol, but to just what extent this solvent can be reduced and yet permit the soap to meet the requirements expected remains to be worked out by practical experiment.

A Word to the Wise

By R. A. KUEVER

"We want a woman, a pharmaceutical chemist, to start at one hundred and fifty dollars a month. Whom can you recommend?"

The above was the nucleus of a letter recently received from a large industrial concern. It is not an isolated instance but one of the very frequent inquiries for women workers that are being sent daily to our colleges of pharmacy. In this case, as in others, we could not supply the demand. There are not enough women pharmacists available to fill such positions.

And why not? Women have not yet awakened to the possibilities of pharmacy as a profession. At the State University of Iowa there are nearly a thousand women students, but of that number only fourteen are registered in the professional colleges. The average girl who intends to enter the business world turns to our colleges and universities for preparation, if finances permit. In nine cases out of ten she plans to teach—not because she is particularly keen about that work, but because the majority of educated women whom she knows as self supporting are engaged in that occupation. We will assume that the average girl is a graduate of an accredited high school, and that she takes a four year course in liberal arts, the usual time required to secure the degree of Bachelor of Arts. During the last two years she takes twenty semester hours work in education and psychology as special preparation for teaching—work she cannot register for before the third year and without which she cannot graduate from the school of education. Of the three hundred and seventy junior and senior girls now registered in the college of liberal arts, practically all are taking this work, rather striking evidence of the majority who choose teaching as a means of livelihood. Her four year collegiate work completed, her certificate granted, the average girl without experience starts out at seventy-five dollars a month. Assuming that, her income is six hundred and seventy-five dollars a year. And that girl has spent sixteen years preparing herself for the work. Had she stopped at the end of two years with inadequate preparation, her capacity as a wage earner would be little increased, nor would it be materially changed at the end of the third year.

Let us assume, however, that she enters a college of pharmacy, working with average ability for two years and receiving her Ph. G. degree at the end of that time. The average girl can command a beginning salary of sixty dollars a month as a minimum, an income of seven hundred and twenty dollars and more often eight hundred and forty dollars a year. If she pursues the course the third year, receiving the degree of Ph. C., she can command a much higher salary, a minimum of one hundred dollars a month, and with a little experience can qualify for positions with large industrial firms at a hundred and fifty dollars a month and upwards. I am told that present day conditions will raise the salaries of teachers. Let us suppose by next fall the average inexperienced university graduate will receive eighty dollars a month. Her income is no larger than that of the pharmaceutical graduate who spends just half the time in preparation and the girl who spends three years in pharmacy starts out with an annual income larger by nearly five hundred dollars.

One hears much of the long hours of the pharmacist. The average woman clerk receives one afternoon during the week and two evenings for her own recreation; rather long hours we grant—but is her time more fully occupied than that of the teacher with several preparations, themes, examination papers and the outside work which teaching entails? The pharmacist has not the long summer vacation, it is true, but nor has she the financial worry which so often accompanies three months of idleness each year. That it is necessity rather than preference with most public school teachers, is evidenced by the number who seek other employment in the summer. Moreover, for the average woman, there is less expenditure of nervous energy in pharmaceutical work than in teaching, so there is correspondingly less need of an extensive vacation.

The demand for skilled women pharmacists is bound to increase. Pharmacy has contributed generously its quota in the war, and men are being constantly drafted from the ranks. The Hicks Bill, now pending in Congress, will grant pharmaceutical commissions to many more and prove an added incentive to army life. While we should all welcome an early peace and the return of our armies to civil life, these possibilities are indeed vague. The consensus of opinion among informed people does not point to the cessation of hostilities within the near future. Meanwhile the international situation is revolutionizing industries and opening new fields of labor. The place it has created for women is a permanent one because they have demonstrated their ability in the business world. They have created the demand for women workers. In no field have they proven more successful than in pharmacy where they have pleasant occupation, steady employment and excellent remuneration. In no profession is there greater opportunity for service and advancement.

PROBLEMS OF PROPRIETARY MAKERS.

The Proprietary Association of America, which held its thirty-sixth annual meeting behind closed doors at the Hotel Astor, New York City, on May 7 and 8, ended its sessions with the re-election of the executives in office during the preceding year. President Frank A. Blair in his annual address characterized the year just past as "the most trying in the history of the association" because of the hostile attitude of many State legislatures against manufacturers of proprietaries.

"When we met a year ago," he said, "we discussed the activities of the various State legislatures, and the anticipated activity at Washington. I do not believe that any of us realized what a difficult period this past year would be. Particularly in the South, the prohibition question has been a serious one, because in their desire to make their territory dry territory, the law makers have enthusiastically endeavored to wipe out everything which contained alcohol, no matter whether it was absolutely necessary as a solvent or preservative or not. In Kentucky and also in Virginia special legislation along this line has been passed. Formula disclosure is proposed in Louisiana and Georgia. A formula disclosure bill is also before the New York Legislature, and constant vigilance and steady watching are necessary."

President Blair urged the members of the association to get into personal touch with leaders of the Anti-Saloon League and the Prohibition Party in their districts, and with as many of the members of their State legislatures as possible, and called attention to the fact that the proprietary medicine industry stood today in better estimation than ever before.

The officers re-elected for the coming year are: President, Frank A. Blair, Chicago, Ill.; first vice president, W. H. Gove, Lynn, Mass.; second vice president, Allen F. Moore, Monticello, Ill.; secretary-treasurer, Charles P. Tyrrell, Syracuse, N. Y.

New Books for Pharmacists

PRACTICAL PHARMACY FOR PHARMACISTS AND PHYSICIANS. A textbook for students in medicine and pharmacy. 2nd edition. 6 x 9 inches, 299 pages, cloth, $3. By Birdsey L. Malthie. New York. The Druggists Circular, Distributors.

The first edition of this book was prepared to meet the needs of students and physicians seeking a knowledge of elementary pharmacy, and it was favorably received, especially by practitioners who found in it most of the essentials they needed for a practical understanding of pharmaceutical technique, the peculiarities of preparations, incompatibilities, etc., as well as suggestions for the solution of other problems likely to face them in prescribing.

In this edition the author has followed his former outline, bringing the book to conform to the salient requirements of the Pharmacopoeia IX and incorporating some additional matter not given in the first edition. This revision has added materially to the value of the book, but it is to be regretted that he has not made, as he might have done, full use of the preparations and facts carried by the National Formulary for a knowledge of these is almost as important to the prescriber at the present time as an understanding of the Pharmacopoeia. We find no reference to the important subject of sterilization, a chapter on which is carried by the N.F. and which was especially introduced into that work for the benefit of those who had not been trained in bacteriological practice. Nor do we find any allusion to such classes of preparations as "mulls," spray solutions, petroxolin combinations, etc., now quite extensively prescribed by physicians. In our opinion these omissions are to be regretted, for in any outline of modern pharmacy the aim should be to plot the "high points" and then to give enough accurate definition so that the student can better grasp the important directions and ramifications of his subject.

Part I is largely introductory and gives definitions for pharmaceutical operations; Part II, Galenic Preparations; Part III, Acids, salts and chemical products used in pharmacy; Part IV, Products of Plants, alkaloids, essential oils, etc., and Part V, Incompatibility. In the main the author's work has been well done, but not as much can be said for the proofreader's part in the printing of the volume. Most of the errors are inexcusable and it will certainly shock certain purists to discover such titles as "oleum amygadalae amarae," "oleum lavendulac florum," "oleum picis liquidiae rectificatum," "aconitum napullus," "matericaria," "barosma servatifolia," just near enough to the accepted form of spelling to be wrong.

CHEMISTRY, FIRST STAGE. By F. P. Armitage, M. A., chief master on the science side at St. Paul's School. 2nd and enlarged edition. 16 mo.. 10 + 80 pages, paper, 60c. London and New York, Longmans, Green & Co.

In the preface to this little work the author states that experience as a teacher convinces him that it is convenient if demonstrations are given to whole classes at once, rather than to single pupils or small groups. He also finds it essential that pupils in advance of their fellows, do not proceed with their work till they are in possession of the facts conveyed by the demonstrations, and have answered the questions which follow. In this edition he has made the endeavor to reconcile the convenience of the demonstrator with the needs of all his pupils. To attain this object, outlines of suitable laboratory demonstrations are provided, the experiments which are to be performed leading the student to the recognition of chemical change. In this manner are studied various acids, bases and salts, sets of questions being added by which the instructor can test a pupil's mastery of the laboratory training he has received, and the learning that should supplement it. Interesting notes on various substances and phenomena and the derivations of most of the scientific and technical terms used in the book are given. The teacher of chemistry in its earliest stages will find in this little work, many helpful suggestions.

THE SCIENCE AND PRACTICE OF PHOTOGRAPHY. By John R. Roehuck. Ph.D., assistant professor of physics in the University of Wisconsin. 8 x 5½ inches, 298 pages, cloth, $2. New York, D. Appleton & Co.

While the primary purpose of this book is to serve as a class room text for students, the author has aimed to make it useful to many earnest amateurs by collecting and systematizing for them material now widely scattered through the literature of photography. This he has done in a manner that will be appreciated by any one who is interested in the fundamental principles relating to the development of the modern art of photography. The experience of the average user of the camera goes to show that some knowledge of the laws of physics and chemistry is needed if the greatest success in practical photography is to be attained. The realization of this need is becoming more and more apparent, and this book goes a long way toward supplying much of this necessary information.

Among the subjects receiving exhaustive treatment are the gelatine dry plate; latent images; negative defects, their causes and remedies; lenses, including the images formed by different kinds of lenses, and their defects. There is a chapter on color photography in which a large number of practical explanations and suggestions are given, the last chapter giving information on how to make good pictures, such points being considered, among other things, as the position, choice of subject, focal length of lens, grouping, and time for exposure and development of lens. The second part of the book is given to a laboratory manual, primarily arranged for the student, suggesting materials, apparatus, and also actual laboratory periods and experiments for each period. The book is illustrated throughout with colored plates and small drawings.

PHARMACEUTICAL BOTANY. By Heber W. Youngken, Ph. G., A. M., M. S., Ph. D., head of the Department of Botany and Pharmacognosy in the Philadelphia College of Pharmacy; member of the American Pharmaceutical Association, Academy of Natural Sciences of Philadelphia, Botanical Society of America, etc. 2nd edition, revised and enlarged, with 195 illustrations. 12 mo., 386 pages, cl., $2. Philadelphia, P. Blakiston's Son & Co.

Like many other textbooks designed for the use of pharmacy students, this work has been very thoroughly revised to conform to the latest revisions of the official standards. Those who have used the first edition of this book will notice in the second edition a distinct advance in the character of the author's work, for his definitions are more scientifically stated and the development of his subject is more directly in line with the points he wishes the student to note than those obtaining in the methods followed in his first volume.

A knowledge of pharmaceutical botany is important to the student who takes up the subject of pharmacognosy

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Your Own Tooth Paste

It is essential that any preparation sold under your own label be of the best quality obtainable, or you cannot hope to compete with advertised products. The prevalence of cut-prices compels druggists to sell a constantly increasing line of special label preparations.

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THIRD—They use only the best and purest ingredients obtainable.

FOURTH—They guarantee the paste to keep perfectly in any climate for a period of not less than one year from date of shipment.

FIFTH—They furnish a list of ingredients to all purchasers, upon application, so that you have full knowledge of the preparation which you are recommending.

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as it is taught at the present time. Dr. Youngken has kept this in mind throughout the entire preparation of this volume, and as a result he has produced a textbook on the subject which will help the student to acquire this knowledge. Chapter I deals with fundamental considerations. Chapter II is devoted to the life history of the male fern, a median type of plant, the study of which gives the student fundamental practice in the use of the microscope and a working knowledge of structures and functions; Chapter III gives the life history of a type of gymnosperm; Chapter IV, a life history of an angiosperm, and in Chapters V, VI and VII, are discussed respectively, vegetable cytology, plant tissues and plant organs and organisms. Chapter VIII on Taxonomy has been greatly extended, several new families of drug yielding plants being described. Many new illustrations have been introduced, a number of which are reproductions of original drawings, photographs and photomicrographs.

LAWS REGULATING PROFESSIONS, TRADES AND OCCUPATIONS. Printed by authority of the State of Illinois, Springfield, 1918.

As was told in the Era last year, the State of Illinois passed an act which went into effect on July 1, 1917, and which reorganized the greater part of the administrative machinery of the State by consolidating many functions, offices, boards, commissions and agencies previously independent of each other into nine new departments of agriculture, finance, labor, mines, and minerals, public health, public welfare, public buildings, registration and education, and trade and commerce. The bulletin before us relates to the centralized administration by the new department of registration and education of the laws relating to architecture, barbering, chiropody, dentistry, embalming, medicine and surgery, nursing, pharmacy, plumbing, structural engineering, and veterinary medicine and surgery, presenting in a comparatively uniform arrangement, a summary of all the laws now in force relating to the callings named. So far as we can discover, the status of pharmacists remains practically as it was under the previous pharmacy act, excepting in the matter of administration, and this is likely to prove satisfactory. F. C. Dodds, who served for many years as secretary of the Illinois Board of Pharmacy, was appointed superintendent of registration for the new department, and pharmacists of the State are to be congratulated on having one in this important office who is so thoroughly conversant with the problems of the drug trade and who has a practical knowledge of general registration administration.

ANNUAL REPORT OF THE SECRETARY OF STATE BOARD OF AGRICULTURE OF THE STATE OF MICHIGAN and of the Experiment Station from July 1, 1916, to June 30, 1917. 8 vo., 749 pages. Lansing, State Printers.

This volume contains a report of the activities of the Michigan State Agricultural College, which is under the direction of the State Board of Agriculture, the work of the Extension department, and of the Experiment Station, the section of the book devoted to the last named division containing the results of a number of investigations that will interest the scientific pharmacist, particularly those relating to the work of the botanist, fungicides, the investigational work on bacteria in milk at different stages in the manufacture of butter, etc. There can be no question but that the druggist in an agricultural community will be able to get many workable suggestions for use in his business if he will familiarize himself with the results of the experts embodied in such reports.

South American Quinine

By F. H. PUTT

European domination of our quinine market need not last forever, just because we always have paid tribute to Holland and Germany. We have suffered too much from ignorance and custom in many lines of business. For instance, why did we year after year, buy our ferromanganese abroad, when we had the makings right here at home? Where were all our captains of the steel industry? Were they too busy keeping up stock values to try out the boasted Yankee inventive ability to make ferro? We have suddenly found we can make ferro, so the reason must have been that nobody had the nerve to try before this.

We go on importing roots, leaves, and seed from abroad, when we could be raising at least half of them right here, and get a better product. We pay freight on bulky quinine bark containing one hundred pounds of total quinine alkaloids to the ton. We handle that bark with expensive help, in an expensive factory, and are at the mercy of foreign owners for our supply. It would be a safe bet that there is not a house in the United States manufacturing quinine, which employs a chemist who could tell a cinchona tree if he ran into one. Our makers depend on Uncle Sam's custom house employees to inspect barks for them. If we made our quinine in an American owned and American managed plant located right among the quinine trees, it would be profitable to handle much lower grade barks than are necessary when the freights are so high. Furthermore, the freight on the alkaloidal content of a ton of bark would be but a mere fraction of the freight on the bark itself.

Quinine originally came from South America. Their best varieties were transplanted to the East Indies, where cheap labor was plentiful, and where the plantations would be under the flag of European nations. Today communication with South America is ample for the quinine trade, and it would be feasible to plant groves and duplicate the Indian and Javanese plantations; but it happens that there are districts where trees are plentiful enough, and run high enough in quinine, to supply a large factory right from the minute when it can consume the bark, without having to wait on new plantations to come into bearing. Since 1910 the writer has scoured South America to locate a district which would combine the necessary features of accessibility, quantity and quality of bark supply, and he sent Dr. H. H. Rusby of the College of Pharmacy of Columbia University, to cruise the districts and report on the feasibility of manufacturing locally.

Dr. Rusby organized an expedition which spent the dry season of 1917 in South America. He reported most favorably, and from the data he established a half million dollar corporation was organized to market quinine in all its forms, and many other alkaloids from tropical plants which are available in the district where it will operate. Its stockholders are men in the drug trade who can push their company's business. In addition to Dr. Rusby, the scientific staff consists of E. B. Putt, president of the Youngstown Chemical Company, and Dr. H. A. Seil of the Standard Chemical Company of Pittsburgh. Both are well known experts in alkaloids and have appeared in many prosecutions by the government under the Food and Drugs Act. The final purification and separation of the alkaloids, as well as the preparation of the salts will be done in another plant located in the United States, so as to avoid the necessity of a large force of expensive men at the Southern factory. By the end of 1918 we expect to be shipping lots of quarter million ounces, and to be in a position to give Holland quinine successful competition in peace time.

The Progress of Pharmacy

New West African Oil Seeds—

Two new nuts from the Belgian Kongo have recently received attention as possible sources of vegetable oils. The botanical sources of the nuts are not known with certainty, but recent experiments seem to indicate that both may have considerable commercial value. N'gore nuts are described as almost spherical in shape, bluntly pointed at one end, and measuring from ¾ to 1 inch in diameter. The kernels are brown externally, mostly of a pale cream color within, and of soft consistency. The samples analyzed yielded 66.2 per cent. of a reddish-yellow viscous oil, equivalent to a yield of 70.7 per cent. from the dry kernels. The oil has an unpleasant odor, an unusually high specific gravity, is partially soluble in alcohol and completely so in ether; it is not soluble in light petroleum, although it absorbs this solvent to some extent; the acetyl value shows that, like castor oil, it contains hydroxylated acid. Although the oil has a high iodine value it does not dry on exposure to air in a thin film. The unpleasant smell and viscous nature of the oil, together with its dark color, render it inedible, but it yields a dark-colored soap, and might also prove useful as a lubricating oil, or be put to several of the uses for which castor oil is now employed.

N'kamba nuts are pale brown in color and measure 1½ inches in length and 1 inch in diameter. On analysis the kernels yielded 14.5 per cent. of a yellow liquid oil, equivalent to a yield of 16.3 per cent. from the dry kernels. The oil is described as being of a non-drying character, and could no doubt be used for various industrial purposes. The residue after the extraction of the oil from the kernels consisted of a cream colored meal having a pleasant and rather sweetish taste, while the residue after expressing the oil from the n'gore nuts was similar in color, but had a faint somewhat unpleasant garlic-like taste. The results of investigation reported indicate that n'gore meal has a high nutritive value, but further examination and feeding trials are necessary to ascertain whether it can be safely used as a feeding stuff.

Identification of Insect Powder—

A new test for the identification of pyrethrum is recommended by Gailand (*L'Union Pharmaceutique*). A sample of insect powder is treated with pure sulphuric acid, with the result that a brown color is formed which gradually changes to a dark red. Traces of an alkaloid can be extracted from the powder by the usual assay methods, and this alkaloid gives a reaction with sulphuric acid similar to that of veratrine. A yellow solution is produced, which gradually changes to a permanent-cherry-red.

Hexamethylenamine as a Fuel—

Hexamethylene tetramine is recommended as a ready substitute for alcohol as fuel for producing a small, hot, sootless flame when a spirit lamp is not available. It is said that two 5-grain tablets of the drug, such as are often carried in a physician's medicine case, will give a clean flame of sufficient heat to boil 5 mils of water in a test-tube within 30 seconds, and of sufficient duration to keep it boiling for two minutes. For boiling needles or small instruments, sterilizing water for hypodermic injections, testing for albumin by the heat and acid method, and many other similar purposes, this extemporaneous technique may be found useful. — (*Merck's Report.*)

Peanut Oil—Oil of Arachide Nuts—

Oil made from red, yellow, or white arachide nuts, the product of Africa, adaptable for use in cooking, packing, the making of butterine, fine paint, etc., described on the invoice as "Arachide Rufisque Extra," and for which the importers claimed free entry under the provisions of the tariff act as "Chinese nut oil, nut oil, or oil of nuts not specially provided for," has been held by the U. S. General Appraisers to be oil derived from a species of groundnuts of the peanut family and subject to duty as peanut oil. Arachide nuts are grown on the west coast of Africa, the oil being produced by pressing the small red, yellow or white arachide nuts, the first pressing producing the more valuable oil and the second and third pressings the cheaper goods, the better grade being adaptable for use in cooking, etc. The report of the chemist who analyzed the oil and the testimony adduced confirmed the view of the Appraisers that arachide nuts were a species of the peanut family and that the oil expressed therefrom is peanut oil.

GATHERING SPHAGNUM MOSS ON PACIFIC COAST

Red Cross chapters on the Pacific Coast have received a call from Washington asking for half a million sphagnum packets by the first of July. Inasmuch as the only moss of the right quality is in the Northwest, the burden of collecting and preparing it falls upon the Red Cross chapters of Oregon, Washington and Idaho. A careful canvass of Oregon and Washington has been made by the university authorities of both states for sphagnum and the best fields have been located near Ilwaco, Wash. Earl Kilpatrick, director of the bureau of development of the American National Red Cross, recently visited that city and reported that on the cranberry bogs near there were to be found immense quantities of the moss. J. J. Bush, of Ilwaco, has been appointed special agent of the American National Red Cross and is mobilizing the resources of the district to gather the moss and pack it for shipment.

But few persons on the Pacific Coast know anything about sphagnum dressings and it is expected that the surgical dressing workroom resources of this territory will be taxed to prepare them, after the moss is cured. The national leader of the sphagnum movement was Harry James Smith, who visited Oregon and Washington early in the year and was killed by a train at Murrayville, B. C., on March 16. During his stay at the University of Washingon, he made a few of the dressings and it was due to their success that the order for the large shipment was received. He had instructed a few people in the making of the dressings, but had not put instructions on paper.

There are about one hundred and twenty species of sphagnum moss, but of these only four are useful in surgical work. Three of these are to be found at Ilwaco, with the imbricatum, considered the best, predominating in that district. The moss gathering campaign is already commencing and it is expected that the entire lot can be secured within three weeks. Each packet in the completed state weighs one pound and in order to secure enough to fill the order for a half a million packets, it will be necessary to gather two million pounds of the moss, as the shrinkage is very marked.

Arrangements have been completed for the fortieth annual meeting of the New York State Pharmaceutical Association which is to be held this year on June 25 to 28 inclusive, at the Catskill Mountain House. Wm. L. DuBois of Catskill is chairman of the local committee, and Louis E. Decker, also of Catskill, is the local secretary, either of whom can be addressed for particulars concerning the meeting, hotel rates, etc.

THE STORAGE OF SERUMS AND VACCINES

Failure on Part of Druggists to Keep in Cool, Dark Places Results in Loss of Potency—Loss of Life May Result

An important notice to druggists regarding the storage and sale of serums, vaccines, and other biologic medicinal agents, has been sent out by Dr. William C. Woodward, Health Officer for the District of Columbia. Dr. Woodward calls attention to the careless manner in which such articles are treated, constituting a danger to the public which the druggists serve because of the fact that many serums and agents require to be kept in a cold, dark place if they are to retain their important properties.

The notice is sent out as a result of a recent tour of investigation among the drug stores of Washington for the purpose of ascertaining certain facts regarding their maintenance. It reads as follows:

"Do you know that serums, vaccines, and other biologic medicinal agents lose their potency rapidly, if they are not kept in cold, dark places?

"Do you know that the dates affixed by manufacturers upon their packages of serums, vaccines, and other biologic medicinal agents, purporting to show the date when such articles will presumably have lost their potency, so as to be no longer salable, are determined upon the presumption that they will be kept in cold, dark places?

"Do you know that if you fail to keep in a cold, dark place the serums, vaccines, and other biologic medicinal agents, that you have for sale, they will lose their potency before the date of unsalability marked by the manufacturer upon the package, and that any physician relying upon such products sold by you after having been kept in that manner may, because of the loss of potency fail to get the results that he should, and that loss of life may result from your neglect?

"Some druggists apparently do not know these facts. If they do, they do not heed them.

"A survey of the methods followed by druggists in the District of Columbia in the keeping of serums, vaccines, and other biologic medicinal agents was made not long ago by the Health Department. In some instances these perishable articles were stored on the tops of counters and show cases, at ordinary room temperatures. Some druggists kept them in drawers and cupboards. behind counters, mingled with numerous other things of diverse characters, without effort to keep a temperature sufficiently low to maintain the potency of the biologic products. Of course, some druggists kept their serums, vaccines, and other biologic medicinal agents under conditions as nearly ideal as the ordinary restrictions of trade would permit, and may be you were one of these.

"It is urged, however, particularly on account of the advent of the warm season, that every druggist make adequate provision for the storage of such serums, vaccines, and other biologic medicinal agents as he carries in stock, if he has not already done so. If he can not provide adequate facilities for this purpose, it is urged that he discontinue the keeping of such perishable articles.

"Vaccines, serums, and other biologic medicinal agents are best kept in a refrigerator or ice box provided for that purpose and reserved for that purpose alone. If this can not be done, they may be kept in any other good, clean refrigerator. It is advised that in either event they be put into clean metal or glass containers, with tight covers, and kept as near the ice as practicable, preferably directly on the ice.

"The precautions set forth above, or similar precautions, are essential if you are to maintain up to the date of expiration of salability, as stated by the manufacturers, the potency of the serums, vaccines, and other biologic medicinal agents that you sell."

Halifax Fund

C. S. Ramsay, president of the Connecticut Pharmaceutical Association, and treasurer of the New York and New England Committee organized by the presidents of the New York and New England Pharmaceutical Associations to solicit funds for the relief of druggists who suffered losses in the Halifax disaster in December last year, reports the following list of contributors to the fund, the list being supplementary to the names of contributors previously published in the several issues of the Era. The total amount of the contributions received to date by the committee is $4,685.75.

Amount previously acknowledged	$3,379.75
Chesebrough Mfg. Co., New York City	$100.00
Powers-Weightman-Rosengarten Co., Philadelphia, Pa.	50.00
O. & W. Thum Co., Grand Rapids, Mich.	50.00
The Pompeian Mfg. Co., Cleveland, Ohio	25.00
Auto Strop Safety Razor Co., New York City	25.00
Erie County Pharmaceutical Ass'n., Buffalo, N. Y.	25.00
C. P. Thompson & Co., Springfield, Mass.	10.00
Bigelow's Pharmacy, Newport, Vt.	5.00
George C. Shepard & Co., Southbridge, Mass.	3.00
H. B. Hamilton, Boston, Mass.	2.00
H. M. Louthood, Newport, Vt.	2.00
Frank H. Moore. Fitchburg, Mass.	2.00
Roscoe Howe, Fitchburg, Mass.	2.00
L. J. Dugan, Webster, Mass.	2.00
George B. Dormin, Fitchburg, Mass.	2.00
Andre A. Coter, Fitchburg, Mass.	1.00
Kirby's Pharmacy, Fitchburg, Mass.	1.00
A. P. Woodward, Danielson, Conn.	1.00
J. A. Laradiere, Southbridge, Mass.	1.00
Theodore St. Onge, Southbridge, Mass.	1.00
Edmond Mercier, Plainfield, Conn.	1.00
A. W. Williams, Danielson, Conn.	1.00
W. M. Buffum, Whitinsville, Mass.	1.00
Elzeas G. Latallec, Southbridge, Mass.	1.00
Arthur Herbert, Holyoke, Mass.	1.00
W. E. Fortier, Springfield, Mass.	1.00
A. Friend, Fitchburg, Mass.	1.00
G. J. Carroll, Gardner, Mass.	1.00
C. Barone, Fitchburg, Mass.	1.00
Bernard & North, Woonsocket, R. I.	1.00
Brooks Pharmacy, Fitchburg, Mass.	1.00
West End Drug Co., Fitchburg, Mass.	1.00
Peter B. Kiely, Fitchburg, Mass.	1.00
W. M. Heikkman, Fitchburg, Mass.	1.00
Timothy Neville, Vergennes, Vt.	1.00
A. J. Evans, Brandon, Vt.	1.00
Brousseau Bros., Rutland, Vt.	1.00
J. M. Jeffords, Enosburg Falls, Vt.	1.00
F. W. Mitchell, Richford, Vt.	1.00
W. D. Kelly, No. Troy, Vt.	1.00
C. S. Skinner, Windsor, Vt.	1.00
W. H. Wheeler & Son, Springfield. Vt.	1.00
H. A. Giddings, Enosburg Falls, Vt.	1.00
A W. Kimball, Derby, Vt.	1.00
W. E. Terrill, wholesale drug salesman, Burlington, Vt.	1.00
George H. Rolfe, Brandon, Vt.	1.00
R. L. McAuliffe, Burlington, Vt.	1.00
C. C. Bingham, St. Johnsbury, Vt.	1.00
C. H. Hicks, Montpelier. Vt.	1.00
W. H. Buck, Wells River, Vt.	1.00
J. W. Blakely, Montpelier, Vt.	1.00
Chas. Blair, West Derby, Vt.	1.00
O. F. Sisco & Son, Bradford, Vt.	1.00
F. D. Pollard, Proctorville, Vt.	1.00
A. W. Livingston, Newport, Vt.	1.00
L. J. Matheson, Montpelier, Vt.	1.00
B. W. Abbott. Fairlee, Vt.	1.00
W. A. Gilbert, Montpelier, Vt.	1.00
O. S. Skinner, Windsor, Vt.	1.00
Fred Harmon, Windsor, Vt.	1.00
Chas. E. Graffam, Brattleboro, Vt.	1.00
A Friend, Montpelier, Vt.	1.00
C. H. Kendrick, Enosburg, Falls, Vt.	1.00
M. H. Sheltus, East Hartford, Vt.	1.00
E. F. Briggs. Morrisville, Vt.	1.00
George C. Ross, Vergennes, Vt.	1.00
	$356.00
Total acknowledged to date	$4,735.75

In the list of contributions printed in the May Era, page 137, the Three-In-One-Oils Co., New York, was credited in error with but $5. The contribution was $25, and the amount should have been so stated. Making correction for the error brings the total amount acknowledged to date up to $4,755.75.

DRUG TRADE ROLL OF HONOR

To honor the men of Pharmacy serving in the war against Autocracy the ERA wants to publish a complete roster. Send full particulars to 3 Park Place, New York.

RALPH BALDWIN, with Dr. D. Jayne & Son, Philadelphia, private, Company A, No. 312 Machine Gun Battery, Camp Meade, Md.
HENRY KOCH, with E. G. Jones pharmacy, Milwaukee, Wis., U. S. Navy.
ARTHUR F. LUNDQUIST, druggist 2015 West Superior St., Duluth, Wis., N. A., Camp Dodge, Iowa.
EDWARD KURTZ, druggist of Goshen, Ind., enlisted in Medical Corps, U. S. Army.
HORNOR TROXELL, former manager Talbott's drug store, West Union, W. Va., Medical department, 2nd Trench Mortar Battalion, Fortress Monroe, Va.
REED GUTHRIE, with W. J. Sturgeon's pharmacy, Kittaning, Pa., Medical Department, Army, Fort Oglethorpe, Ga.
WILLIAM KRONTLADT, proprietor Nicollet Ave. Drug Co., Minneapolis, Minn., U. S. Army, Camp Dodge, Iowa.
P. E. GUNTON, Liquid Carbonic Co., Chicago, Ill., National Army, Rockford, Ill.
HARPER H. INK, secretary and treasurer of the Tonsiline Co., Canton, Ohio, Company B, 306th Motor Supply Train, Section T., Camp Sherman, Ohio.
LOUIS NIESTHEIMER, registered pharmacist with Theo. Moratz drug store, Bloomington, Ill, Medical Supply Department of the Army, Chicago.
ROBERT E. FOOT, relative of S. A. Foot, manager, Dabrooks' Perfumes, Detroit, major, U. S. Army, assigned to staff of General Pershing, France.
CHARLES GIMBEL, proprietor of Gimbel's Pharmacy, 2046 W. 3rd St., Davenport, Iowa, Army, Camp Dodge, Iowa.
J. R. KENNEDY, proprietor of drug store, Market street, Johnstown, Pa., enlisted for special service in France.

The Buffalo College of Pharmacy contributes the following list of names of students and alumni now in the service:

HOMER G. ALLEN, '15, Camp Dix, Wrightstown, N. J.
S. GREGORY ALLEN, '16, Camp Upton, Long Island.
W. THEODORE ANDRESKOWSKI, '15, Oklahoma City, Okla.
WALLACE R. AUSTIN, '13, sergeant, Camp Dix, Wrightstown, N. J.
ALFRED W. BARNETSON, '13, Spartanburg, S. C.
ROY M. BARR, '14, Fort Oglethorpe, Ga.
WILLIAM BECK, '14, Fort Niagara, Youngstown, N. Y.
CONRAD J. BLESSING, '17, Newport, R. I.
SEYMOUR H. BLISS, '12, Spartanburg, S. C.
CHESTER J. BORST, '14, sergeant, Camp Jackson, Columbia, S. C.
JOHN P. BOYLE, '09, sergeant, somewhere in France.
PAUL C. BRAUNSCHWEIGER, '14, sergeant, Camp Dix, Wrightstown, N. J.
WILLIAM H. BROSSWAY, Camp Dix, N. J.
NELSON F. CHAPIN, A. C. '15, Camp Dix, N. J.
RAYMOND P. CHESTER, Spartanburg, S. C.
ALBERT H. COLING, '12.
LOUIS R. CONNELL, '10, Federal Bldg., Buffalo, N. Y.
JAMES J. COURNEEN, '12, Fort Oglethorpe, Ga.
JOHN L. DAVIS, '16.
CLARENCE DESING, '16, Camp Dix, Wrightstown, N. J.
BERNARD J. DOWD, '17, sergeant, Camp Dix, N. J.
JOHN P. DWYER, '17, Camp Dix, N. J.
C. ARTHUR ELDEN, '17, Ordnance Dept., Edgewood, Md.
GEORGE W. ELLICOTT, A. C., Aberdeen, Md.
WILLIAM W. FARNUM, '10, Fort Oglethorpe, Ga.
RAYMOND J. FITZPATRICK, Newport, R. I.
ARTHUR C. FLENTGE, A. C. '17, Washington, D. C.
STANLEY FORMIAK, '17, Camp Dix, Wrightstown, N. J.
CHESTER W. FRANK, '13, lieutenant, Camp Custer, Battlecreek, Mich.
GEORGE H. FREEMAN, somewhere in France.
WARREN H. S. GABRIEL, A. C. '14, Camp Dix, N. J.
NICHOLAS J. GIANELLI, '16.
HAROLD L. GRASER, '17, Washington, D. C.
CHARLES A. GREEN, '16, Fort Oglethorpe, Ga.
LOUIS H. GUARD, '11, Geneva, N. Y.
LEWIS E. HAMEL, '17, Pine Camp, Watertown, N. Y.
HARRY HAMPLE, U. S. S. Sachem, care N. Y. City P. M.
HERMAN L. HARDY, '15, Camp Upton, L. I.
RAYMOND C HARRISON, '16, Camp Dix, N. J.
HAROLD P. HAWKS, '10, lieutenant, San Antonio, Texas.
WILLIS G. HICKMAN, instructor, lieutenant, somewhere in France.
GEORGE R. HOLLAND, '15, sergeant, somewhere in France.
CHARLES B. HOLTON, '16, Base Hospital, Camp Wheeler, Ga.
J. LESTER HUDSON, '15, Gettysburg, Pa.
JOHN H. HUNT, '17, Camp Dix, N. J.
RAYMOND M. HYDE, Spartanburg, S. C.
CLAUDE H. JACKSON, '13.
WYNN L. JACKSON, '17.
HUGH A. JUDD, '15, sergeant, honorable discharge.
THOMAS P. KERWICK, Rochester Base Hospital.
SPENCER C. KIMMEL, A. C., Ordnance Dept., Cleveland, Ohio.
ROSWELL W. KINNIE, '14, Camp Dix, Wrightstown, N. J.
CARL W. KIPHUTH, '15.
HERMAN E. KUGLIN, '17, Camp Devens, Ayer, Mass.
JOSEPH J. LOJACONO, '12, Camp Dix, N. J.
WILLIAM E. LYTLE, '11, somewhere in France.
HAROLD O. MADSEN, sergeant. Spartanburg, S. C.
PHILIP H. MAGNER, '17, somewhere in France.
WM. R. MATHEY, '17, Fort Oglethorpe, Ga.
CHARLES D. McCARTHY, '16, Aberdeen, Md.
DONALD McMASTER, A. C. '17, sergeant, San Antonio, Texas.
CARL E. MILLER, '15, Newport, R. I.
NEIL E. MORGAN, '14.
WILL WAYNE MORRIS, '13, Rochester Base Hospital.
EARL C. S. NABLO, '13, Spartanburg, S. C.
THOMAS M. NOLAN, '13, Rochester Base Hospital.
PATRICK H. O'MALLEY, '16, Camp Dix, N. J.
GERALD E. PARSONS, '15.
HAROLD W. PENFIELD, '11, somewhere in France.
RAYMOND H. PESTELL, A. C. '17, Washington, D. C.
ROY G. PFOTZER, A. C. '15, Camp Taylor, Louisville, Ky.
THEODORE PICKERING, A. C., Signal Corps, Curtiss Plant.
ALEX. W. ROY, '14.
FREDERICK W. RUNGE, A. C., Camp Dix, N. J.
GEORGE SCHNEIDER, A. C., Camp Jackson, Columbia, S. C.
MARVIN D. SCOTT, '17, somewhere in France.
ALBERT A. SHANNON, A. C., Camp Dix, N. J.
EMERY R. SMITH, Camp Dix, N. J.
EUGENE F. SMITH, '15.
CARLTON C. STACEY, '17, U. S. A. M. A., Ithaca, N. Y.
EVERETT B. STONE, '17, sergeant, Spartanburg, S. C.
HAROLD J. STRASENBURGH, '13.
THOMAS W. SULLIVAN, '11, Camp Dix, N. J.
M. CLAYTON THRUSH, '01, surgeon, Camp Dix, N. J.
ABRAHAM J. TILEVITCH, '17, Camp Upton, L. I.
GEORGE W. VADAKIN, '15, Naval Hospital, New London, Conn.
WARD R. WARBOYS, '15, Spartanburg, S. C.
FRANK M. WHALEN, sergeant, Honorable discharge.
LLOYD P. WHITNEY, '17, Camp Dix, N. J.
C. KINGSLEY WILLIAMS, '17, Newport, R. I.
FREDERICK E. WILLIAMS, '16, Oswego Base Hospital.

Ohio University, College of Pharmacy, supplies the names of the following students who have entered the service:

WALDO R. HEIBY, ex '18, enlisted as pharmacist in the Navy, Naval Training School.
ARTHUR D. NEW, '19 Signal Corps, Aviation Branch.
VICTOR F. GREENSLADE, Medical Corps, 322nd F. A., Camp Sherman.
RALPH T. MOORE, ex '17, Battery E., 64th Artillery, Camp Nichols, New Orleans.
ROBERT B. BROWN, '16, Hospital Service, Fort Thomas, Ky.
MERELL E. SWAYNE, Battery E., 137th F. A., Camp Sheridan.
LOUIS DELUCIA, '18, Fort Oglethorpe, Ga.
PAUL N. EBERT, '18, Great Lakes Naval Training Station, Ill.
PAUL GROFF, Ordnance Department, not yet assigned.
JOSEPH SEIFERT, '18, Base Hospital, France.
FRANK SHURTZ, Hospital Corps, Aviation Branch, France.
JASON RUSSELL, Sanitary Officers' Training School, Washington, D. C.
O. H. MYERS, ex '17, Sanitary Department, Camp Sherman.
J. M. NEAL, 1st lieutenant, Medical Corps.

The University of Michigan, College of Pharmacy, sends the following contribution to the drug trade roll of honor:

C. H. THORINGTON, '17, now with Base Hospital No. 1, France.
WALTER HAROLD WISTRAND, junior student at the time of his enlistment, with U. S. Ambulance Service Section 591, who has been on the Western front since last September, was recently awarded the Croix de Guerre for courage and devotion to duty. Twice he has been gassed and sent to the hospital for periods of three weeks each.
LAWRENCE ATKINSON, '17, 2nd lieutenant, detailed as instructor engineering training camp, Camp Lee, Petersburg, Va.
SAMUEL A. ASERSOHN, '17, promoted to ranking sergeant, 3rd Battalion, 57th Infantry, Humble, Texas.

WILLIAM BONISTEEL, '18, U. S. Navy, Great Training Station.

MERLE M. WOODWARD, '17, Co. 10, 3rd Battalion, 153rd Depot Brigade, Camp Dix, N. J.

The University of Minnesota College of Pharmacy reports the following graduates and students in the country's service:

ABE STRIMLING, Ph. G., '17, Ph. C., '18, Reserve Officers Training Camp, Camp Dodge, Ia.

RAYMOND A. VAALER, Ph. C., '17, Reserve Officers Training Camp, Camp Dodge, Ia.

ROLF C. AURNESS, '19, in service, Columbus, Ohio.

OLIVER W. GUILBERT, '19, in service at Camp Wadsworth, S. C.

RAYMOND M. AMBERG, '18, 417th Squadron, A. S. S. C., Pysht. Washington.

GOTTHARD J. SAHOL, ex '19, instructor in pharmacy, Naval Training Station, Great Lakes, Ill.

The University of Illinois School of Pharmacy reports the following additional names:

CHARLES G. CLAPP, junior student, 1818, lieutenant, Aviation Corps.

ARNIM WYLE, present senior class, Naval Officer's Training Camp.

BIRGER LINDH, '12, Training Camp for non-commissioned officers, Camp Hancock, Augusta, Ga.

L. A. GORHAM, '15, Gas Defense, Philadelphia.

CHARLES JHAVRENEK, '16, Camp McArthur, Waco, Texas.

LEON RAMBO, '19, hospital apprentice, U. S. Navy.

RAYMOND MAHAFFEY, '19, hospital apprentice, U. S. Navy.

G. P. ECK. '10, lieutenant, Medical Department of the Army, assigned to duty in Texas.

H. E. JOHNSTON, '14, Aviation Service, Urbana, Ill.

CHARLES WILSON, '17, Ambulance Co. 158, 115th Sanitary Train, Camp Kearney, Cal.

CARL T. MILLER, '17, Base Hospital Unit No. 11, Camp Dodge, Iowa.

DAN DOHERTY, '18, U. S. Navy.

HANS W. VAHLTEICH, Ph. C. '18, U. S. Navy.

LESLIE HOUSE, '18, U. S. Navy.

GRANT HEIDBREDER, '17, U. S. Navy, Great Lakes.

BERT HEIDBREDER, '11, Coast Artillery, Fort Morgan, Ala.

EDGAR HEIDBREDER, '13, sergeant, Medical Corps, in charge of Inoculation Infirmary, Camp Dodge, Iowa.

A. S. JAGLOWSKI, '15, member of Co. E., 343rd Infantry, Camp Grant, Ill.

D. S. REAL, '17, GEORGE W. JINDRICH, '15, HARRY KANTA, '15, and WILLIAM M. TATE, '18, are at Camp Grant.

ARNIM HAAG, RAYMOND FALLON, JOHN W. GILCHRIST, and JAMES BRUMFIELD are at Jefferson Barracks.

University of Iowa, College of Pharmacy, Iowa City, sends the following names to be added to the Honor Roll:

C. W. WILSEY, '19, 2nd lieutenant, Officers' Training Camp, Camp Dodge, Ia.

E. T. BJORNSTAD, '16, 2nd lieutenant, Camp Funston, Kans.

P. W. YULE '19, of Harcourt, Ia., enlisted in U. S. Marines.

R. E. BARNES, '19, electrical department, Aviation Service, Mount Clemens, Mich.

R. B. SMITH, '19, of Marengo, Ia., Coast Artillery, Newport News, Va.

V. H. TYLER, '16, sergeant, Post Hospital, Ft. Snelling, Minn.

Students and Alumni of the Philadelphia College of Pharmacy in the military service of the country;

LEWIS H. SHEESLEY.

HARVEY A. SHILEY, '17, Wardmaster No. 8, Base Hospital, Camp Meade, Md.

RAYMOND L. SHOVER, '14, Corporal, Co. K, 311th Infantry, Camp Dix, N. J.

PAUL B. SHRENK.

JACK SHTOFMAN, '12, 114th Ambulance Co., 104 Sanitary Train., Camp McClellan, Anniston, Ala.

DONALD B. SMITH, '17, Hospital Corps, 112th Infantry, Camp Hancock, Ga.

NORMAN SOLLENBERGER, '09, Field Hospital, Co. 111, Camp Hancock, Ga.

RUSSELL SORBER, Med. Corps, 149th Machine Gun Battalion, American Expeditionary Force, France.

PAUL H. SOUTHARD, '11, 146th Field Hospital, Camp Sheridan, Montgomery, Ala.

LORANCE R. SPENCER, Jefferson Hospital Unit, No. 38, 2nd Regiment Armory, Camp Meade, Md.

ALBIN STIKAROFSKY. '16, Caisson Company, 301 Ammunition Train, Camp Devens, Mass.

R. A. STOFFLET, '09, Hospital Corps, 311th Field Artillery, Camp Meade, Md.

JACOB TESMAN, '17.

JOHN THOMAS, '17, Sanitary Detachment, Barracks No. 9, Camp Meade, Md.

CHARLES I. TOMLIN, '15, 328th Field Hospital, Camp Gordon, Atlanta, Ga.

EUGENE H. TOPPER, Sergeant, Supply Co. 316th Infantry, Camp Meade, Md.

J. HOMER TYSON, '17, Infirmary, 316th Infantry, Camp Meade, Md.

JOHN M. VOGEL, '13, Phar. Mate, 1st class, Yard Dispensary, Navy Yard, Philadelphia.

GEO. WAGNER, 2nd Lieutenant.

HARRY D. WAGNER, '15, Base Hospital, Camp McArthur, Waco, Texas.

C. B. RAYMOND WAGNER, '17, Medical Corps, 316th Infantry, Camp Meade. Md.

PAUL J. WALDNER, '96, Assistant Surgeon, U. S. N. Bureau of Medicine and Surgery, Philadelphia, Pa.

HOWARD H. WEANER.

LESLIE S. WEBSTER, '17, U. S. S. Alabama.

E. M. WEIDNER, Wardmaster, Base Hospital. Camp Meade, Mo.

ABRAHAM WEINER, '14, Hospital Corps, 315th Infantry, Camp Meade, Md.

LEWIS E. WETTLING, Aviation Corps, U. S. A. Ground Service.

STUART E. WIEN, U. S. S. Guinevere.

HARVEY W. WILCOX, Preshyterian Mobile Unit A, Fort Porter, N. Y.

RAYMOND WILLIAMS, '16.

LAWRENCE K. WOLF, '13, Marine Barracks Dispensary League Island, Pa.

ABRAHAM WYMAN, '14, Medical Department Barracks, Camp Gordon, Ga.

HARRY B. YOUNG, Field Hospital Co. No. 110, Camp Hancock, Augusta, Ga.

DELL W. YOUNGKEN, '14, Sergeant, Medical Detachment, 56th Infantry, Chattanooga, Tenn.

DUANE E. WEBSTER, Ph.C., M.C.P. '17, with Webster's Pharmacy, Grafton, Mass.; Pharmacist, 39th Infantry, U. S. A., Camp Greene, Charlotte, N. C.

The Dow-Weatherhead Drug Co., Cincinnati, Ohio, recently gave an entertainment to its employes in that city at which F. S. Snabley, chairman of the committee, announced the following honor roll of men formerly in the employ of the company and who are now in the Army or Navy:

Charles Schutz, Jr., Geo. Dulle, Jr., Bert Moesta, Karl Fulton, Robert A. Waters, Lee Lauermann, Roy Kelsey, Arthur Sarsfield, Cliff Miller, Albert Ludwig, Paul Whittle, Angus Wilson, Harvey W. Filer, Irvin Taylor, Frank P. Holstein, Frank P. Chaney, Leslie L. Duff, C. M. Wrobleski, Val. Diebold, Paul Belew, Harold Welch, Larry Bowden, Joe Robinson, Allen Higdon, Louis Willett, E. C. McMillan, M. Bettinger, Joe Mealy, Joe Sullivan, Carl Franke, C. C. Caillet, John L. Mowery, Walter Eppley, Harry Loesche, Ernest Robb.

RECIPROCITY WITH COLORADO

The 24th Annual Report of the State Board of Pharmacy of Colorado for the year ending July 1, 1917, has been issued in bulletin form. Besides a list of registered and assistant pharmacists and directory of proprietors, managers and apprentices engaged in the drug business in Colorado, it contains the Colorado pharmacy law; the rules of the Board and the new reciprocal amendment to the pharmacy law; the alcohol law with formulas for bathing alcohol, the State narcotic law, and the rules and regulations for the enforcement of the act. It is noted under the reciprocal amendment to the pharmacy law passed by the last legislature, the Colorado Board of Pharmacy became an active member of the National Association of Boards of Pharmacy and is now prepared to register applicants who hold certificates by examination in other States the boards of which hold active membership in the national organization.

Missouri Ph. A.'s Coming Meeting

The Missouri Pharmaceutical Association will hold its annual meeting this year at the Elms Hotel, Excelsior Springs, beginning June 11. Secretary Whelpley announces that this convention will very decidedly reflect international conditions and be of great significance in the history of the organization. Dr. James H. Beal will discuss compulsory health insurance, and the State Commissioner will explain the law controlling the sale of explosives. Papers dealing with the shortage of clerks and store conservation in detail will also be presented. The Missouri Board of Pharmacy will hold an examination at the same place on June 10, while additional attractions will be the gathering of the Commercial Travelers' Association and the meeting of the Ladies' Auxiliary, the members of which have an interesting program scheduled.

Schools and Colleges

BROOKLYN

The twenty-seventh annual commencement of the Brooklyn College of Pharmacy held on the evening of May 15 at the Brooklyn Academy of Music concluded a year of intense activity, and notwithstanding the calling to the colors of many students, the graduating class was one of the largest which ever left the institution. The programme began with an overture by Hanau's Concert Band, which was followed by the entrance of the members of the graduating class, numbering 155, and the college officers and faculty. Prof. William C. Anderson, dean, conferred the degrees, W. Clifford Raynor, Ph. G., delivered the valedictory, and Hon. Melville J. France, United States District Attorney, addressed the graduating class.

The prize winners were as follows: College gold medal, Moses Gordon; College silver medal, Moses M. Rappeport; College bronze medal, M. Novendstern; Anderson medal, Jacob Furman; Alumni prize, Joseph Wallman; A. Ph. A. nomination, W. Clifford Raynor; Junior silver medal Robert J. Gordon. The college prizes were awarded by the president of the college, Henry B. Smith, and the alumni prize by Louis F. Thumser, Ph. G., Phar. D., president of the Alumni Association.

Prof. A. Percival Lohness, secretary of the faculty, read the senior and junior honor rolls which contained the following names:

Senior Class 1918—Joseph Girch Antokolsky, William Blocker, Bernhard S. Chassan, Bessie Comras, Mary Feider, Sophie Feider, Arthur Friedson, Herman Frost, Jacob Furman, Moses Gordon, Samuel Grife, Ruth A. Haykin, Monroe Krasnoff, Moses Novendstern, Meyer Pavlow, Golda Rabinowitz, Moses M. Rappeport, Clifford W. Raynor, George Resnick, Minnie Kuperstock Shapiro, Louis Waldman, Joseph Wallman, Hyman Watskin, Celia Weiner.

Junior Class 1918—David Chaikin, Solomon Chase, Solomon Friedman, Jacob Gelb, Percy Goldstein, Abraham Goodman, Robert J. Gordon, Herman S. Gumanow, Charles A. Herb, Solomon Hertz, Lena Katz, Daniel Kollen, Nathan Krell, Joseph Lacks, Rose Lemer, Bessie Mitchell, Benjamin J. Rosenthal, Samuel Rothaus, Joseph Ruden, Michael Sepiesel, Isador Silverman, William Silverstein, Michael Taranto, Morris Toback, Joseph Weinberg, Israel Willner, Philip Wolen.

NEW JERSEY

Col. James W. Howard, son of Gen. O. Howard, delivered the address to the graduating class of the New Jersey College of Pharmacy at the annual commencement held in Wallace Hall, Newark, on the evening of May 22. President William O. Kuebler also addressed the students, and Secretary E. M. Patten handed out the diplomas to the graduates, thirty-two in number, whose names are as follows: E. K. Applebaum, Alexander Becker, Edward J. Beresford, Benjamin Berhaut, Paul Cuffari, Louis Dakleman, Henry Friedman, A. J. Goldstein, Joseph Ginsberg, Clayton C. Hall, Isador Helfgott, Leslie J. Ilaria, Isador Kravitz, Walter M. Kerner, Irving Kaplan, William H. Luckey, Louis L. Lerner, Philip Mendelsohn, Fred R. Meuser, Walter E. Moore, Jr., Francis Naefe, Herman Nussbaum, W. J. O'Brien, Robert A. Prince, Philip B. Pritsch, Louis N. Reiss, Anna M. Reibel, Walter Rech, Louis Schapiro, Michael Uhorchak, Morris Wiener, and Frederick Warnke.

Prizes were awarded as follows; College, $25 in gold, Louis Schapiro; chemistry prize, a silver medal, Benjamin Bernhaut, who also won the pharmacy prize, and the analytical chemistry prize, Mr. Schapiro also won the materia medica prize and the dispensing pharmacy prize. Alumni prizes for the highest general average were awarded to Mrs. Anna M. Reibel, of the graduating class, and Edward W. Ward, of the junior class The valedictory was delivered by Irving Kaplan.

UNIVERSITY OF ILLINOIS

The members of the first and second year classes have presented to the School of Pharmacy a handsome silk service flag, with forty stars, which represent the number of students of the school who have enlisted or who have been called into service since the United States entered the war a year ago.

The three Chicago departments of the University of Illinois—the College of Medicine, College of Dentistry and School of Pharmacy, will hold joint commencement exercises at the Studebaker Theatre, Chicago, on June 8th. The School of Pharmacy will graduate about forty including four young women.

The Alumni Banquet will be held at the Sherman House on Thursday evening, June 6, the alumni of both the Northwestern University and the University of Illinois, schools of pharmacy uniting as hosts to the graduating class. Prominent alumni from both schools will be represented upon the toast card. This will be the first alumni function since the merging of the two schools.

Miss Bertha Reisman '07, has been appointed pharmacist for the Mary Thompson Hospital.

The women students of the School of Pharmacy have formed a new chapter of the Lambda Kappa Sigma known as the Gamma Chapter. The officers are: President, Miss Georgina Bower; vice-president, Miss Pauline McClure; Secretary-Treasurer, Mrs. Neff E. Bakkers. This is the first time that the school has had representation in a sorority and with the looked-for increase in the number of women students it is hoped that the new organization will gain and prosper.

The library of the University of Illinois School of Pharmacy now numbers 3,366 bound volumes and 1,200 pamphlets, representing an increase of over three hundred bound volumes and 200 pamphlets during the year. The library receives 65 current periodicals and has complete or nearly complete sets of all current pharmaceutical periodicals published in the United States.

ALBANY

Commencement exercises of the Albany College of Pharmacy were held on May 30 in the auditorium of the State education building, the graduates numbering 42. Of these eleven were absent in the military service, and received their diplomas before taking up arms. Their names follow:

Harold Byron Carnocrose, Carthage; Henry Joseph Carpenter, Altona; Donald Finn, Troy; Buel Hunt Francisco, Chatham; Vincent Francis Guerra, Schenectady; John Lawrence Lindsay, Olmsteadville; Livingston Fredericksburg Lossa, Canajoharie; John Quigley Sheehan, Utica; Stephen Athenasium Venaer, Albany; E. Harold Vincent, Ghent; Clifford Nathan Vogel, Canajoharie.

The graduates who received their diplomas in person were:

Caplan Altman, Troy; Harold James Baldwin, Chicopee, Mass.; Benjamin Berkowitz, Albany; F. H. Birkholz; C. E. Brooker, Schenectady; John Thomas Byrnes, Ilion; Martin Joseph Callery, Johnstown; Joseph Candido, Albany;

James Claire Colwell, Richfield Springs; Raymond Earl Cressler, Kingston; William Frederick D'Aran, Lowville; George Patrick Golden, Mechanicville; Francis Ambrose Hans, Albany; Don Melvin, Hardenbrook, Albany; Marvin David Harmon, Chatham; Francis Stanton Henry, Scotia; James Henry Hogan, Saratoga Springs; Alva Tremain Knight, Schenectady; Lawrence Clayton Lanfair, Diamond Point; Samuel Leviton, Albany; Thomas Augustus McCann, Greenwich; Earl Joseph McCarthy, Little Falls; Leo Joseph O'Keefe, Albany; George Daniel Ostrow Brooklyn; Clarence Edwin Remsen, Middletown; Charles Joseph Rourke, Green Island; John Slater, Schenectady; James Dolan Sullivan, South Glens Falls; Louis Edwin Weber, Kingston; Thomas Joseph Wilson, Amsterdam.

Including the above list the total number of graduates since the organization of the college 37 years ago is 918.

UNIVERSITY OF MINNESOTA

The final examinations begin on June 8 and continue through June 15. The baccalaureate service occurs at the University Armory on Sunday, June 16th. Monday, the 17th, will be devoted to senior class-day exercises. The forty-sixth annual commencement of the University, which is the twenty-fifth of the College of Pharmacy, will occur on June 20th. There will be a comparatively small number of graduates from the College of Pharmacy this year, because of the lengthening of the two-year course to the three-year course.

The College recently made the final shipment of the first lot of eight thousand bottles of tincture of digitalis it prepared for the Government. It is now at work on a second lot of ten thousand bottles. The College will cultivate the maximum quantity of digitalis afforded by its facilities. That part of the campus to the south of the Pharmacy Building and the Plant House, used last year for digitalis cultivation, is being similarly utilized this year.

The usual annual course of First Aids to the Injured will be omitted this year because of the lengthening of the course from two to three years.

PHILADELPHIA

The 1919 Class of pharmacists bids fair to be a truly co-educational gathering. Many women students are expected to fill the gaps made by the young men who have gone abroad to fight the Hun.

The College is offering six weeks special courses in several subjects which begun on May 20. These courses are in preparation for Army and Navy Hospital work and for civil pharmacists who desire advanced clinical laboratory instruction.

The bi-monthly meeting of the entire instructional corps of the College is now a permanent institution and of much educational and inspirational value to the younger members of the teaching staff.

'Al' Hartman, a member of the 1912 Class, is another P. C. P. man to lay his life on liberty's altar "over there" in France. He is remembered as a sensible, loyal and popular student, and his passing away is keenly regretted by his friends and former teachers.

LOUISVILLE

The Forty-seventh Annual Commencement of the College was held on May 16. The degree of Graduate in Pharmacy was conferred by President Simon N. Jones on the following:

Theodore E. Deddens; Oscar Demling; Rudolph W. Doerhofer; Emil M. Keller; Charles T. Lesshafft; Curtis W. Miles; Sidney B. Passamaneck, William E. Schreiber; Ferdinand D. Stoll and William G. Tompkins all of Louisville; Charles M. Dominicis, Mayari Oriente, Cuba; Cecil M. Haggard, Winchester, Ky.; Ernest Clyde Hall, Shelbyville, Ky., and Lowell L. Segraves of Sturgis, Ky.

The class honors, awarded by Dean O. C. Dilly, included the College medal for first honor in the Senior class to Ferdinand D. Stoll; the Voigt & Co. medal for second honor in the Senior class to Sidney B. Passamaneck and the Peter-Neat-Richardson Co. medal for first honor in the Junior class to Randolph L. Hertel of Louisville.

The speakers were the Rev. W. N. Briney; Dr. Simon N. Jones, President of the College; Sidney B. Passamaneck, Salutatorian; and William E. Schreiber, Valedictorian.

CONVENTION CALENDAR

June 11-13—Nebraska, at Lincoln; J. G. McBride, University Place, secretary.
June 11-14—Missouri, at Excelsior Springs; H. M. Whelpley, St. Louis, secretary.
June 12-14—Florida, at Tampa; J. H. Haughton, Palatka, secretary.
June 18-20—Colorado, at Manitou; Chas. J. Clayton, Denver, secretary.
June 18-19—Georgia, at Tybee Island; T. A. Cheatham, Atlanta, secretary.
June 18-21—Illinois, at La Salle; W. B. Day, Chicago, secretary.
June 18-20—Kentucky at Cerulean Springs; J. W. Gayle, Frankfort, secretary.
June 18-20—Massachusetts, at Swampscott; James F. Guerin, Worcester, secretary.
June 18-21—New Jersey, at Spring Lake; Jeannot Hostmann, Hoboken, secretary.
June 19-20—Alabama, at Huntsville; W. E. Bingham, Tuscaloosa, secretary.
June 19-21—North Carolina, at Raleigh; J. G. Beard, Chapel Hill, secretary.
June 19-20—Utah, at Provo; F. J. Folland, Salt Lake City, secretary.
June 21-26—Ohio, meeting at Toledo for Lake trip on steamer; Theo. D. Wetterstroem, Cincinnati, secretary.
June 25-27—Indiana, at Lafayette; Wm. F. Werner, Indianapolis, secretary.
June 25-27—Iowa, at Fort Dodge; A. Falkenhainer, Algona, secretary.
June 25-27—Michigan, at Detroit; F. J. Wheaton, Jackson, secretary.
June 25-28—New York, at Catskill; E. S. Dawson, Syracuse, secretary.
June 25-27—Pennsylvania, at Wilkes-Barre; Robert P. Fischelis, Philadelphia, secretary.
June 25-28—Wisconsin, at Elkhart Lake; E. G. Raeuber, Milwaukee, secretary.
June 27-28—New Hampshire, at Newcastle, Eugene Sullivan, Concord, secretary.
June 27-28—Maine, at Portland; Dr. M. L. Porter, Danforth, secretary.
July 9-11—Virginia, at Natural Bridge; E. L. Brandis, Richmond, secretary.
July 9-11—Montana, at Butte; J. A. Reidel, Boulder, sec'y.
July 15-17—California, at San Diego; E. A. Henderson, Los Angeles.
August 6-8—North Dakota, at Fargo; W. S. Parker, Lisbon, secretary.
August 9-10—Wyoming, at Thermopolis; R. J. Cook, Casper, secretary.

Professional & Trade Associations

NEW YORK BRANCH

(*Special to* The Pharmaceutical Era)

Dr. A. R. L. Dohme, president of the American Pharmaceutical Association, was present at the May meeting of the New York Branch and addressed the members on his proposed plan for a federation of all pharmaceutical organizations through representation in the house of delegates, council and board of control under the direction of the A. Ph. A. He reviewed the history of the organization as now constituted, its founding in 1852, the withdrawal of the wholesalers in 1876 to organize the National Wholesale Druggists Association, and the later formation of the Proprietary Association, the Association of Boards of Pharmacy, the Conference of Pharmaceutical Faculties, etc. Almost every year had witnessed the organization of a new pharmaceutical association. In contrast with this divided effort along special lines, the American Medical Association had, by concentration of all branches of medicine, organized 60,000 physicians, while the A. Ph. A. by dissociation had weakened itself. The members of the A. M. A. work together with a single purpose and in this respect they wield great influence and power.

Dr. Dohme stated that at his request Samuel L. Hilton had investigated pharmaceutical conditions at the army cantonments and the report was a "sad story for those who were sick." There was no proper dispensing of medicines, and the purport of medicines and dispensing were not understood. "For the Government to recognize one branch of medicine and to ignore another branch is ludicrous. Why hasn't pharmacy been properly recognized?" he asked. "Because ten different organizations have different ideas of what they want. It is glaring inefficiency."

"The Harrison narcotic law was spoken of in Washington as the best piece of constructive legislation that had been enacted in several years. This result was obtained by the organization of the Drug Trade Conference, which engineered the propaganda and advanced the measure by obtaining expressions of opinion from all branches of the trade. The results crystallized in the law represented the combined effort of six national associations aligned on a united front." Copies of Dr. Dohme's printed plan were passed around to the members, and he enlarged upon some of the features of particular interest to the retail pharmacist. He begged that all branches of pharmacy should get together and agree upon as many points as they possibly could and then proceed to thresh out the others.

President-elect Charles H. LaWall, of Philadelphia, thought that the proposed plan should be advanced by all to a successful conclusion. He said that when the doctors began to drift together, the pharmacists began to drift apart. He thought this was somewhat due to the fact that members of the medical profession do not cut into each other's earning powers as do pharmacists. He decried the fundamental jealousies of some pharmaceutical associations which caused them to constantly work against each other. Instead of becoming a separate organization when it did the N. W. D. A. should have remained in the parent body as a section.

Continuing the discussion, Prof. LaWall expressed the opinion that the percentage of associations that could be induced to join the new federation was highly problematical. He suggested a plan similar to that followed by the American Association for the Advancement of Science at its annual meetings, that of a "convocation week." By such an arrangement it would be possible for all of the national associations to meet at the same place and make mutual arrangements, and by bringing the members of the different organizations thus together, it would mean more progress in the one period than could be accomplished in years of correspondence or by discussions at individual conventions. He also pointed out that the "lines must be strengthened in the individual states, so that each state would have a pre-requisite law, and thus place pharmacists throughout the entire country on an equal footing."

F. E. Holliday, secretary of the N. W. D. A., stated that his association will be in a receptive frame of mind toward an organization of the kind proposed. Personally, he feared the size of such an association, and felt that its success would depend upon the men at its head. He said that James W. Morrisson, of Chicago, former president of the N. W. D. A., and a delegate of the A. Ph. A. to the coming meeting of the wholesalers in Chicago, would be glad to confer with others for presentation of the subject to that body.

Dr. Arny pointed out that the primary question was not whether the proposition was merely good for the individual associations, but was it good for pharmacy as a whole? He thought a plan should be agreed upon that would be fair to all associations, and that all organizations should be made units, especially in a legislative sense. He referred to Dean F. J. Wulling's report at the last meeting of the A. Ph. A. as having been considerable of a dream, which might, after all, be worked out in a highly practical way.

Dr. Henry C. Lovis, speaking for the American Drug Manufacturers' Association, said that the members of his organization had spent considerable time on the subject at their last convention, and had expressed genuine sympathy along the lines of the reunion of the different branches of the trade. He thought that those interested would find the manufacturers advancing the plan as the movement proceeded.

Dr. Jacob Diner recalled the initial meetings of the National Drug Trade Conference, when six branches of the trade met to express "77" opinions. He asserted that now was the time for the A. Ph. A. to do something constructively for pharmacy. Dr. Jeannot Hostmann deplored the failure to invest the House of Delegates with power to accomplish anything. He asked that the parent body "give the young baby a chance." Dr. Joseph L. Turner, chairman of the branch, disagreed with a previous statement that the A. Ph. A. had not accomplished anything constructive in the last ten years. He declared that it had "kept the fires of scientific pharmacy burning."

Dr. Joseph L. Mayer said that scientific pharmacists were inclined to veer away from commercial pharmacy. He recalled a recent branch meeting at which Louis K. Liggett was the principal speaker and upon which occasion several regular attendants absented themselves. He thought that a pharmaceutical organization which endeavored to include retail pharmacists in its membership should give the retailer something for his money. The retail druggist wants to learn how to make money; he isn't interested in the melting point of acetylsalicylic acid. Neither is he interested in a paper on colloidal pharmacy. He thought, however, that federation could be easily accomplished.

Dr. Dohme reported an interview at Washington, in the course of which he and Dr. F. R. Eldred, of Indianapolis, in conference with Dr. C. L. Alsberg, Dr. L. F. Kebler, various Government chemists, experts, army officers and others, learned that the pharmaceutical profession need not make special endeavor to conserve sugar and alcohol, but should look forward to conservation of glycerin at some future time, a year or so hence, the amount of glycerin used in pharmacy constituting an important percentage of the nation's available supply of that article. The idea of conserving alcohol was condemned as the "height of folly," the United States being described at the conference as the potential source of supply for all the alcohol used in the world. One person at the conference explained that new uses of alcohol are being looked for in order that large quantities of spoiled corn may be utilized. "Conservation of alcohol is out of the question, and $9 to $10 a gallon for alcohol is a crime!" Alcohol was "blue pencilled" at the conference before Drs. Dohme or Eldred could say a word. Dr. Dohme further stated that the sugar used in pharmacy amounted to one-twentieth of one per cent. of the amount used annually in the confectionery trade, which figure settled the sugar question.

The glycerin used by the pharmaceutical and drug interests is an appreciable percentage of the whole, but Dr. Dohme explained to the conference the requirements of the U. S. P. and N. F. regarding this article, and Dr. Alsberg stated that it would be impossible to change such requirements or amend the Pure Food and Drugs Act in regard thereto. On behalf of the American Drug Manufacturers' Association, Dr. Dohme made the suggestion that the chemists in the forty laboratories of the members of that organization study during the coming year means for the conservation of glycerin and to report the result of their work, so that if later it became necessary glycerin might be properly conserved. During the conference Dr. Alsberg wanted it understood that no conservation of glycerin in the manufacture of pharmaceuticals would be called for this year.

A resolution introduced by Mr. Mayo was adopted, inviting the A. Ph. A. to hold its 1919 meeting in New York City, Dr. Diner stating that if the association would come to this city occasionally the membership would be trebled. Announcement was made that Dr. H. H. Rusby would deliver a lecture on the evening of August 15, at the A. Ph. A. convention, Chicago.

CHICAGO BRANCH

Dr. Oliver Smith, of Parke, Davis & Co., Detroit, presented an illustrated lecture on the production of diphtheria antitoxin and discussed the use of vaccines and sera in the armies of the present war at a meeting of the Chicago Branch, held at Kuntz-Remmler's restaurant on April 26. He stated that smallpox vaccine, typhoid vaccine and tetanus antitoxin were almost universally used in these armies. The custom has developed of using all three of these prophylactic agents with good results on the individual simultaneously, that is within one day. Three injections of typhoid vaccine of increasing strength at intervals of about a week, are usually used. The result of this prophylactic treatment has been that small pox is practically unknown, typhoid is reduced to an exceedingly small percentage and tetanus is much lessened. Immense quantities of these sera and vaccines are being used. The British government has called for 1,250,000 ounces of antitetanic serum for 1918. The increase in the number of horses used for antitoxin production by his company is from about 250 to 750 and of guinea pigs in proportion.

The prophylactic use of typhus vaccine has been demonstrated of much value, according to figures stated by Prof. Smith, especially among doctors, nurses and other attendants in hospitals where typhus is found. It is generally conceded, however, that the disease can be controlled by proper sanitary and disinfectant procedures, especially by the elimination of the body louse.

A report was made before the Branch by the committee having in charge the exhibit of U. S. P. and N. F. galenicals to be shown at the American Medical Association convention in June. In addition to a large exhibit of galenicals, ten preparations have been selected, including tasteless castor oil, several low-alcoholic elixirs and some syrups, for sampling to physicians who may be interested.

Local Secretary Gathercoal and Mr. Buss and Professor Day of the committee on arrangements discussed the preparations made and planned for the entertainment of the A. Ph. A. Convention in August.

DETROIT BRANCH.

At the regular meeting of the Detroit Branch of the A. Ph. A. held at the Wayne County Medical Bldg., April 19, W. L. Scoville reported the death of Wilbur F. Jackman, and expressed the loss felt by the branch, F. F. Ingram, Jr., gave a brief talk regarding the memorial portrait of Dr. Schlotterbeck which is to be presented to the College of Pharmacy of the University of Michigan by the alumni and asked that all contributions toward the expense be made payable to Dr. A. B. Stevens, but sent to the speaker.

Chas. Barthen, gave a very interesting talk on the method of manufacturing and uses of ampoules. This form of medication was shown to possess all the advantages of hypodermics and to be much simpler for the use of the physician. E. R. Jones, dean of the Detroit College of Pharmacy, explained the uses of "Hydrogenated Fats as future Ointment Vehicles." Samples of ointment zinc oxide, U. S. P., made from a combination of crisco and wax, were shown in comparison with the product as obtained by the use of benzoinated lard. The difficulty of obtaining fats which have been hydrogenated to the proper degree was discussed, since this is the trouble experienced with the products now on the market.

Hugh Craig, godfather of the Detroit Branch, was welcomed to this city by President Kimmich on behalf of the local chapter. Mr. Craig expressed his interest in the discussion of the use of hydrogenated fats as ointment vehicles. He said he had served his apprenticeship when manual labor was not a lost art among the druggists, and that he was exceedingly proud of this fact in particular. Although he had been campaigning for the Liberty Loan for the previous ten days, Mr. Craig's well-known sonorous voice was in good trim.

W. A. Hall gave a short talk of appreciation of the papers of the evening which expressed the crystallization of years' work by the authors. Dr. Hoffmann, member of the State Board of Pharmacy, gave a talk on "Dry Laws of Michigan." Since this is a question which is not as thoroughly understood as it should be, an animated discussion followed.

At the meeting held on March 15, Dr. Lescohier, a member of the medical staff of Parke, Davis & Co., gave a very interesting talk on vaccines and antitoxins. With the aid of a stereopticon, the steps in the preparation of these products were shown. The druggists were cautioned regarding the storage of vaccines and antitoxins, which, on account of their extremely delicate nature, must not be subjected to temperatures higher than specified on the containers.

Charles F. Wendell, display-manager of the J. L. Hudson Company told his audience that, as a class, the druggists' windows were not what they should be in order to make them yield the proper returns. But bearing in mind the points which Mr. Wendell named as the first essentials, Detroit druggists will soon rank as leaders in the art of window decorating.

Boards of Pharmacy

CALIFORNIA

At the recent meeting of the California Board of Pharmacy registration was granted to the following who successfully passed the recent examination:

Assistants: George B. Miller, Wm. A. Oliver, Samuel O. Foertmeyer, Clarence R. Grigsby, Frank A. Schelling, Roy W. Herring, Chiuichirow Age, Harold M. Raw, George H. Frazier, Genevieve C. Morrison, Daniel W. Clark, Jr., Arno P. Zwicker, Louis H. Seabach, Philip S. Haley, Wm. Domenici, William A. Leader, Walter C. Aitken, William Ray Lee, Silas Ross Putnam, Claire Glenn, Arno Frank Fink, John C. Anderson, Elmer G. Conn, Irma Wilson, Greenleaf N. Farrin, Geo. G. Cushman, James D. Black, Everett C. Cox, John W. Whisenant, Charles L. Callis, Frank L. Bellan, Raymond S. Cheney, Paul Pierstein, Leo. G. Dambach, Joseph Halff, Zenya Ozeki, Harry E. Stone, Chas. J. Schulthess, Winnifred M. Tuttle, Arnold J. Piezzi, Leland H. Hodgson, Wm. F. Hillebrand, Clifford A. Parker, Lulu Di Betta, Cornelius E. Dunn.

Licentiates: Louis F. Lambert, Louis C. Kinney, Oliver H. Duvall, Julius A. Ronkin, Homer Glenn White, Peter N. Antonopoulos, Harlan Isaac Allis, Theodore R. Fuller, John M. Percy, Amos G. Ritter, Homer L. Asselin, John Renz, Rose Virden, Edward J. Donoghue, John E. Doty, Fred Chas. Lee, George H. Hyland, Henry E. Goodner, Howard H. Gram, Nobujiro Owase, Frederick W. Hawkes, Camille A. Rombach, Joseph B. Swim, Frank B. McSheehy, Carlos A. R. Ezeta, Inez Boyne Comper, Geo. E. Harriman, Raymond Kilduff, Norbert W. Mixter, Kee Quong Fong, Lonnie W. Holland, Arthur Carl Scott, Harry A. Graves, Nellie F. Ridley, J. D. Van Vleet, Chas. J Feerster, Mary Barnes, Ralph A. Fortier, Ernest Rogers, Harold T. Bush, Clinton S. Wallace Wickliffe Matthews, Jr., Hugh R. Selvy, Frank F. Lindstaedt, Sister Fidelis Conner, Justus E. Zimmerman, Andrew C. Kallstead.

Certificates were issued to the following on presenting credentials and affidavits of twenty years' experience: Lyman T. Shreves, Oliver H. Hand, Edwin D. Gibbons, Harry W. Cook, Herbert M. Snider, John M. Dunbar, Rudolph H. Reh, Carl F. L. Miller, Clark L. Richards, Herman M. Wiebke, Carl B. Douthat, A. G. Gillespie.

The next meeting will be held in Los Angeles on July 15, the examinations commencing July 17. The Board will also meet in San Francisco on June 22, the examinations beginning on July 24.

GEORGIA

Before adjournment of the recent meeting of the Georgia Board of Pharmacy the members passed a resolution expressing their appreciation of the work being done by the internal revenue department in the State in enforcing the Harrison narcotic act and pledging the support of the board in carrying out the provisions of the law. Another resolution complimented the work done by W. S. Elkin, Jr., who recently resigned for business reasons, after having served on the board for eleven years.

The following applicants successfully passed the examinations for registration and were granted licenses: W. E. Albritton, Paducah, Ky.; S. C. Asbury, Greenboro; Lee Allen, Jr., Americus; J. P. Anello, Tampa, Fla.; W. M. Beard, Cherboter, Miss.; John M. Boarn, Guyton; John C. Berry, Pisgah, Ala.; W. G. Bridges, Unadilla; Miss Inez Batemann, McIntosh; Charles F. Brannon, Headland, Ala.; P. E. Blackmon, Buchanan, Ala.; L. L. Brantley, Marietta; W. H. Brannan, Savannah; John S. Bryan, Marietta; Charles E. Crawford, Chipley; Robert G. Clay, Auburn, Ky.; D. D. Clarke, Columbus; J. M. Cleverly, Augusta; D. R. Conpsenter, Atlanta; H. E. Center, Lafayette; Miss K. M. Coughlan, Berkley, W. Va.; L. E. Culpepper, Perry, Fla.; P. L. Caldwell, Atlanta; R. E. Cochran, Camilla; H. L. Chichester, Macon; C. M. Denney, Savannah; George B. Guann, Savannah; Moses Goldstein, Portsmouth, Va.; Walter J. Ganey, Rutledge, Ala.; G. L. Horlman, Pulaski, Va.; L. L. Henry, Atlanta; Charles A. Huff, Atlanta; W. C. Jarvis, Hazlehurst; M. S. Jackson, Talledega Springs, Ala.; J. D. Kitchens, Adairsville; G. W. Knight, Savannah; M. F. Kennedy, Atlanta; John K. Kinsey, Cornelia; Morris Lefkoff, Atlanta; E. V. Leatherman, Pineville, La.; Amanda Lopez, Atlanta; J. B. Minkey, Macon; William R. Martin, Jackson, Tenn.; H. M. Mann, Atlanta; C. L. Mayson, Augusta; C. V. McEachern, Haynerville, La.; W. L. Wertham, Fayette, Ala.; R. L. Powers, Perryville, Ky.; P. L. Parker, Notasulga, Ala.; J. B. Polhill, Jr., Louisville; George T. Pierce, Atlanta; U. S. Ragan, Americus; A. J. Schomburg, Atlanta; T. W. Stratton, Cornwell, Ky.; D. E. Shermen, Horatio, Ark.; W. B. Vinson, Atlanta; B. A. Wilkerson, Quitman; E. P. Wilson, Serville; C. R. Waldrop, Atlanta; B. T. Watts, Knoxville, Tenn.; W. L. West, Wadley; H. M. Woggoner, Lebanon, Tenn.; J. A. Wreem, Savannah; J. D. Young, Atlanta.

INDIANA

Edward A. Stuckmeyer, secretary of the Indiana Board of Pharmacy, has given out a list of the successful candidates who took the recent examination at Indianapolis:

Registered Pharmacists—Benjamin H. Bowles, Paris, Ill.; Philo L. Burrin, Indianapolis; Joseph Cartoselli, Indianapolis; Thomas C. Collier, Indianapolis; Edmund W. Dorn, Vincennes; Morris J. Drummond, Indianapolis; Fred Dunnington, Indianapolis; Vollie C. Forsythe, Indianapolis; Elbert C. Green, Indianapolis; Joseph Gyarmati, Harry J. Jermain, Indianapolis; Edward O. Lagle, Mitchell; Harry C. Morris, Indianapolis; George E. Oren, Indianapolis; Walter H. Weil, Greenfield.

Registered Assistant Pharmacists—Alphonse L. Fisher, Indianapolis; George C. Full, Indianapolis; Harold N. Hinkle, Martinsville; Frank S. Reinoehl, Terre Haute; Theodore A. Stokes, Indianapolis; Elden J. Teeter, South Bend; Charles E. Wooten, Indianapolis, and Paul W. Oren, Indianapolis.

NEW MEXICO

The New Mexico State Board of Pharmacy met at the Elks' Home, Clovis, recently and examined applicants for registration. The following were successful: A. D. Logback, O.R. E. Vans, and T. E. Olive.

RHODE ISLAND

At the recent annual meeting of the Rhode Island State Board of Pharmacy, Nicholas F. Reiner of Providence was elected president of the board, succeeding Dr. William McCaw who declined a re-election. Other officers elected were; vice-president, James T. Wright, Newport; secretary and treasurer, Howard A. Pearce, Providence.

Following the report of a special commission, appointed by the Governor last year, for the purpose of revising the health laws of the State and consolidating various boards exercising certain public health functions, a bill has been introduced in the Senate which provides for the consolidation 'of eleven boards and commissions under the direct control and supervision of the State Board of Health. This board, should the bill become a law, would be vested with all the rights, powers and duties now conferred or imposed by the provisions of any law now in force, upon the present State Board of Health, the board of pharmacy, the board of registration in dentistry, the board of examiners in barbering, the board of registration in embalming, the board of food and drug commissioners, the board of examiners in optometry, the board of veterinarians, the board of examiners of trained nurses, the inspector of meat and the chiet and assistant factory inspectors.

PENNSYLVANIA

At the examinations held by the Pennsylvania Board Pharmaceutical Examiners recently, eight applicants for registration as pharmacist appeared, of whom five were passed. Forty-nine applicants took the examination for assistant pharmacists and thirty one were passed. Certificates were granted as follows:

Pharmacists—Harry W. Gruver, York; Lawrence S. Kelchner, South Bethlehem; Michael Leckstein and Mollie E. Stein, of Philadelphia; Ray E. White, Bellefonte.

Assistant Pharmacists—Clarence G. Earlin, of Pittsburgh; John Baker, Charles A. Benninghove, Rose Feldman, James A. Fitzgerald, Jacob Katsky, Joseph Koff, Manuel S. Lehrfeld, William A. McCauley. Maurice Rich, Joseph S. Toobin, Salvatore Venuto and Martin Wesolowski, Jr., all of Philadelphia; Bernard H. Stief, Ashland; J. Wesley Allen and Lowell F. MacCartney, of Altoona; Stanley A. Stephens, Berwick, Hollis M. Wible, Camp Hill; Russell B. Liken, Emlenton; Norman Irwin, Gettysburg; Fred H. Snively, Greencastle; John S. Milligan, Greensburg; Clarence M Galloway, Lenover; Scott R. McCloskey, Lock Haven; Michael Pachuta, Mount Carmel; Gains B. Hertzler, Mechanicsburg; Alfred W. Arnold, Osceola Mills; Bernard J. Holleran, Pittston; Marcus A. Goodyear, Sunbury; Charles W. Coffman, Waynesboro; Charles H. Pitt, Camden, N. J.

The next examinations will be held in Pittsburgh and Philadelphia on June 7 and 8, at the Pittsburgh College of Pharmacy and the Philadelphia College of Pharmacy, respectively. The secretary of the board is L. L. Walton, Williamsport, Pa.

KENTUCKY

A class of 26 applicants for the registered pharmacist examination and 22 for assistant examination appeared at the meeting of the Kentucky Board of Pharmacy held in Louisville on April 9 and 10. The following passed:

Registered Pharmacists—W. E. Albritton, Paducah; Robert C. Clay, Auburn; T. E. Deddens, Louisville; E. Clyde Hall, Shelbyville; Rudy Y. Jones, Paducah; Ollie Kuhlenholtor, Louisville; William McGhee, Lexington; Julian R. Scates, Fulton; Louis A. Stuppf, Louisville; B. Sanders Wilson, Paducah.

Assistants—Victor P. Dalo, Louisville; Randolph L. Hertel, Louisville; Clarence Hinkle, Barbourville; William D. Nave, Jr., Frankfort; Chas. J. Osterholt, Louisville; Sidney B. Passamaneck, Louisville; Eugene E. Speer, Owensboro; Ferdinand D, Stoll, Louisville; John L. Thinnes, Cincinnati, O.; Jos. L. Vanfleet, Louisville; T. P. Brown, Stanford; Robert A. Fihe, Louisville; Jos. H. Monoghan, Louisville; Lowell L. Segraves, Louisville; A. C. Thornton, Louisville; Chas. H. Tye, Louisville; Raymond R. Youngblood, Louisville.

The next meeting of the Board will be held at Dawson Spring, July 9 and 10.

OHIO

The Ohio State Board of Pharmacy examined 45 applicants for registration as pharmacists, and 10 applicants for registration as assistant pharmacists at the recent examination held in Colombus on April 2 and 3. The following were granted certificates:

Pharmacists—Fred Adelstein, Daniel C. Nutter, R. Paul Seufzer, Cleveland; William J. Habig, Charles J. Reinstatler, Cincinnati; Roy Gilbert Marsh, Norwood; David Craig Winkler, Earl George Carpenter, Columbus; James C. Smith, Steubenville; Fred W. Fearing, Dayton; Lawrence K. Boehme, Germantown; Rollin C. Andrews, Warren; Odo M. Swoveland, Rockford; Henry S. Mooney, Cardington; Ernest M. Love, Galion; Dale L. Cunningham, Toledo; Leonidas T. Ohler, Delta; Clay Dalton Lantz, Portsmouth; Vance R. McBane, East Liverpool William L. Robinson, Gallipolis; Mrs. V. Brito, Ada.

The following applicants for the pharmacist examination obtained grades high enough to entitle them to an assistant pharmacist certificate: Howard O. Blocher, Massillon; Jonas F. Dolch, Cincinnati; Myer Efros, Cleveland.

Assistant Pharmacists—Bernard Shapiro, Isidore W. Caplin, Jacob P. Hagen, Cleveland; William J. Green, Mt. Gilead; Hubert W. Motz, Cuyahoga Falls; Arthur M. McGory, Sandusky; John J. Enright, Urbana.

Registered as pharmacists on registration as pharmacists in other states: Otto C. Zimmerman, Ft. Recovery, from Indiana; Henry A. Katzenmeyer, Cleveland, from Pennsylvania; Michael Zill, Monroe, Mich., from West Virginia, and Harry M. Kier, Pittsburgh, from Pennsylvania.

Lawrence K. Boehme, Germantown, O., obtained the highest grade on the pharmacist's examination, or 85.3 per cent., while William J. Green, Mt. Gilead, Ohio, received 87 per cent., the highest grade in the assistant's examination. The certificate of Walter E. Fanning, Middletown, was revoked by the board for making false affidavit on his application when appearing before the board for examination.

F. H. King who served on the board for the past twenty years, was recently appointed by Governor Cox for another term of five years. The office of the secretary of the board has been moved from the State House Annex to larger quarters in the Wyandotte Building.

The next examination will be held in Columbus on June 18.

MARYLAND

David R. Millard, secretary of the Maryland Board of Pharmacy recently announced the names of the candidates for registration in this State who were successful at the examinations held April 3 and 4. The list includes these names: Pharmacists—James A Barone, W. S. E. Coleman, Lester S. Carrick, Walter G. Griggs, Joseph Hollingsworth, Benjamin A. Kriger, Leo. B. Lathroum, Sister Mary McColm, Irving Millenson, George A. Muller, A. A. Mossell, William F. Reindollar, Leo Rettaliata, Augusta Leah Soladar, Simon Solomon, William F. Voshell and William A. Waples.

Assistant Pharmacists—J. Thomas Bedford, J. R. Bernardini, John F. Hejda, Frank A. Kaufmann, William C. H. Keyser, Jr., John C. Krantz, Jr., William F. Lemke, James R. Plowman, Howard E. Schindell, Harry D. Schucalter and M. E. Schucalter.

Women in Pharmacy

CONDUCTED BY EMMA GARY WALLACE

CALL FOR WOMEN PHARMACY STUDENTS

Women pharmacists are facing an unexpected situation, and have placed upon them at this time the responsibility for a peculiar duty. As a nation we have been drawn into the greatest and most critical war which has been waged since the dawn of time, and it is not only our solemn duty but a *national necessity,* to win this war, if we and coming generations are to remain a free people. Our country is giving of the flower of its manhood and its treasures of wealth.

Women are obliged to step into the vacant ranks all along the line. In many positions they can be trained in a short time for service, and so these positions call strongly, but in a pharmacy time and study are both needed for the right kind of service, yet the rewards are well worth the extra preparation. Besides this, the health of the nation must be safeguarded, and without pharmacists and laboratory workers this will be an impossible task.

For a number of years drug store help has been growing scarcer and scarcer, and unless we who understand matters as they are, bestir ourselves, we are going to see the ancient and honorable profession of pharmacy invaded at many points. What can we do about it? What service to our nation and to our profession, can we render at this time?

Only a few short months away is the beginning of the college year which should see large numbers of women students enrolled to undertake serious preparation for this work, and during the months of the coming summer these students will be able to gain valuable experience in practical drug store work, for the call for assistance is much greater than the supply.

Then let every woman pharmacist do her part to persuade one or more bright young women about her to prepare for this line of work. The High Schools will soon graduate large numbers of mentally alert, well-developed girls. Why should not a large number of these enter our colleges next fall? Many of them will pass the opporunity by because it never occurs to them. Let us, each one, do our part and be responsible, if possible, for the enlistment of at least one woman student in pharmacy!

AROUND THE CIRCUIT

Miss V. T. Twaragowsky of Cleveland, has recently become the proprietor of the Lockwood Pharmacy, at 13,349 Euclid Avenue. Her many friends are wishing her success in her new venture. Time is proving the fitness of women for pharmacy, and the present national crisis presents an opportunity for farreaching and patriotic service.

The Ladies 'Auxiliary of the Milwaukee Pharmaceutical Association and the members of the latter organization, enjoyed a very pleasant card and dancing party at the Auditorium, May 6th. The pharmacist members of the Base Hospital located near that city, were the guests of the evening.

The ladies of Louisville Chapter, No. 11, gave a very enjoyable dance recently at the Hotel Tyler, which was followed some days later by a theater party. Both were largely attended and greatly enjoyed.

A great many ladies attended the quarterly meeting of the C. R. D. A. Mrs. Joseph Forbrich, the outgoing president of the chapter, and Mrs. J. H. Riemenschneider, the newly elected chapter president, were both called upon and gave very timely talks, telling what the W. O. N. A. R. D. stood for, what the local chapter had accomplished during the past year, and what it hoped to do this summer.

The newly elected officers of the Women's Organization of Chicago Chapter, No. 2, are: President, Mrs. J. H. Riemenschneider; first vice-president, Mrs. A. L. Coppock; second vice-president, Mrs. Carl Warner; third vice-president, Mrs. H. C. Christensen; recording secretary, Mrs. Charles Walgreen; corresponding secretary, Mrs. J. Weireter; treasurer, Mrs. John Mahaffy.

As a token of appreciation of good work, the members of the Chapter presented Mrs. Joseph Forbrich with a beautiful wrist watch, the presentation speech being made by Mrs. Herman Schulte. The ladies were made happy by the announcement of a very generous gift of $50 by Mr. Charles Walgreen, to be used as seemed best by the ladies for war work. They decided to use the sum to purchase yarn which would be made up by the members, the knitted articles being sent to druggists, drug clerks, and sons of druggists now in the army or navy, or who might later be called to enter the service. The meeting was held in the Red Room of the Hotel La Salle, Tuesday, April 9th. The meeting was addressed by Mrs. Jacob Bauer, chairman of the Women's Committee of the Liberty Loan Campaign.

The annual birthday luncheon of the Chapter was given in the same room on May 7. The Chapter mothers of soldiers and sailors were the guests of honor. Prof. C. N. Wertz, President of the Chicago Academy of Fine Arts, gave an address on "Design and Its Uses as Demonstrated in Dress."

Cleveland Chapter, No. 21, W. O. N. A. R. D., are considering taking an active part in a special campaign for extending the work of the Cleveland School of Pharmacy. Funds are to be raised which will be invested in the form of an endowment. $150,000 is the mark set. It is hoped that a new building may be erected in connection with Western Reserve University and upon its campus, and so make more desirable surroundings possible and also increase the educational facilities materially. It is also hoped that a Medicinal Plant Garden may be undertaken. Every person who is sufficiently interested in helping raise this endowment fund and who is willing to give $5, will be entitled to a vote in the selection of the Board of Trustees for the new school.

Indianapolis Chapter, No. 20, is busy as usual. They have a regular informal dance every two weeks under the leadership of Mrs. Edward Ferger and her assistants.

The chapter ladies and their husbands were recently entertained by Mrs. Frank H. Carter of 1921 Broadway, Indianapolis, at an evening dinner party. Mrs. Arrold, Mrs. Dickson, and Mrs. Oren, chapter members, assisted Mrs. Carter in serving. There were fourteen couples present, each man paying fifty cents for the privilege of attendance. This money is to be used to buy materials to make garments for war orphans.

Mr. Stuckey, Mr. Carter, and Mr. Sproule gave interesting talks on subjects of special interest to the druggists and their wives. The evening was spent in dancing and card playing and everybody voted it a thoroughly enjoyable affair.

The Chapter participated in the Liberty Loan Parade. Fourteen of the members stood on a float which held a large mortar and pestle, beautifully decorated in flags and flowers. The slogan was:

"Indianapolis druggists save many lives;
French war orphans are clothed by their wives."

Mrs. Thomas Thornburg of East Fifteenth St., was the hostess of the April business meeting. A special discussion was enjoyed on "The War Registration Card for Women," Mrs. Ferger giving an explanation of it and its purpose.

Mrs. J. V. Calver, the National Organizer of the W. O., has been spending several months in California. She is now working East again, having reached New Orleans. She reports business conditions as most encouraging.

Rock Island Chapter, No. 15, combine business and pleasure. At the last meeting the members were the guests of Mrs. E. Jericho of 1848 Fourteenth St., Moline. Most of the afternoon was spent in Red Cross work, after which they enjoyed a game of cards. Mrs. John Schneider, 1529 Twenty-Eighth St., will be the next hostess.

St. Louis Chapter, No. 8, made a substantial gift of Smileage Books for the soldiers and are actively engaged in selling Thrift Stamps and War Saving Certificates. Mrs. Shen was appointed chairman of the committee to sell Liberty Bonds. Mrs. Iltner, Mrs. Cloughly, and Mrs. Ludwig were hostesses at the May meeting held at the Planters' Hotel.

Philadelphia Chapter, No. 6, has sent out the call to its members to do no knitting for themselves or their friends which can possibly be avoided, in order to conserve wool for the use of the soldiers.

The Chapter has just contributed $25 toward the establishment of a Recreation Center in France, which is being promoted by the Pennsylvania General Federation of Women's Clubs, War Victory Commission.

The officers unanimously elected by the Chapter for the ensuing year are: President, Mrs. William E. Lee; first vice-president, Mrs. H. C. Clapham; second vice-president, Mrs. R. H. Blackwood; third vice-president, Mrs. Charles King; fourth vice-president, Mrs. Frank Fluck; fifth vice-president, Mrs. Robert Simpson; treasurer, Miss A. M. Kessler; recording secretary, Mrs. F. T. Burke; corresponding secretary, Mrs. L. R. Hoffecker.

Members of the W. O. will be exceedingly sorry to learn that Mrs. Fannie E. MacBride, a beloved ex-President of the W. O., and the present President of Youngstown Chapter has been very ill. She is not yet convalescent. It is sincerely hoped that she may be speedily restored to health.

Mrs. J. H. Riemenschneider, the National President of the W. O., urges upon the women folk of the drug trade and especially those in the organized chapters, to realize the need of special activities at this time, to promote and increase the bond of good fellowship among us which must be ours in the work ahead of us to do.

Cincinnati Chapter, No. 5, held its April meeting at the home of Mrs. Fred Kotte, Mt. Auburn. Officers for the following year were nominated.

At the recent meeting, official notification was received of the W. O. Scholarship award to Miss Mary Snyder of Covington, Ky. Miss Snyder, it is expected, will enter the Queen City College of Pharmacy next fall. Dr. Frank Cane, Dean of the college, has generously offered half of the scholarship and the W. O. will attend to the rest.

A large number of members and guests of Boston Chapter, No. 1, were present at the annual business meeting and election of officers which was held Tuesday, May 9th, at the Hotel Westminster. Several reports were read and the following officers for the ensuing year were elected: President, Mrs. Ella S. Twitchell; first vice-president, Mrs. Gertrude Acheson; second vice-president, Mrs. May L. Grover; recording secretary, Mrs. Wentworth; corresponding secretary, Mrs. Marie P. Caffarella; auditor, Mrs. Margaret Fallon.

At the conclusion of the business meeting, Mrs. Bertha L. Janes presented the retiring president, Mrs. Mary R. Green, with a beautiful pendant and chain, in behalf of the Chapter, in token of their appreciation of her untiring faithfulness during her term of office.

Louisville Chapter, No. 11, recently enjoyed an indoor picnic at the home of Mrs. Henry Schweitzer, who was assisted in entertaining by Miss Janet Schweitzer, Mrs. William Anz, and Mrs. Oscar Paul. Miss Henrietta Baass was the chairman of the Entertainment Committee. The ladies went in the afternoon, enjoyed a delicious repast, and spent the evening together.

At the next meeting of the Louisville Chapter, the nomination of officers will take place. The ladies are making fine headway in adding to their fund for a Chapter Club House.

Philadelphia Chapter, No. 6, has recently sent seven jackets each valued at $8, to our soldiers in France. These were made out of 54 pairs of old kid gloves. The Chapter has recently contributed 10 property bags and 6 comfort bags, valued at $6.75 each, to Red Cross work; also 18 pairs of fine, home-knitted, woolen socks.

Mrs. Robert Braswell and Mrs. William Van Antwerp entertained Mobile Chapter, No. 9, at an all-day knitting party for the soldiers in April.

Wilmington Chapter, No. 12, ladies are working busily for the growing list of solders and sailors who "belong to" the members of the organization, for there are a number of their boys at the front.

Mr. and Mrs. Carter entertained the members of Indianapolis Chapter, No. 20, and their husbands, at a delightful dinner dance recently. The members meet every Thursday with the President, Mrs. Edward Ferger. They spend the day in her beautiful sun parlor, sewing for needy French children.

TRIBUTES TO REMINGTON AND HOLZHAUER.

Distinguished members of the American Pharmaceutical Association were the late Charles Holzhauer, president of the association, who died at Newark, N. J. on Nov. 19, and Prof. Joseph P. Remington, a former president, who died on Jan. 1. Both men had taken an active part for many decades in the work of the organization, and both had acquitted themselves ably for the upbuilding of pharmacy. The death of these men was a direct loss to the association, and to place on record the appreciation of the membership of their services, committees were appointed to draft a suitable expression of the association's obligation to them. The committee of the association which prepared the resolutions on Mr. Holzhauer's death, is signed by H. H. Rusby, chairman, E. W. Runyon, H. M. Whelpley, C. O. Bigelow, and J. G. Godding. The tribute to the memory of Prof. Joseph P. Remington is signed by Charles H. LaWall, H. V. Arny, E. G. Eberle, S. I. Hilton and Frank G. Ryan, committee.

Credit and Commercial Case Decisions

By GEORGE H. MURDOCH, Newark, N. J.

"Act of God"—An act of God is the manifestation of a superhuman power which breaks the chain of causation in the realm of human activity—117 N. E. (Ind.) 869.

Confidential Communications to Attorney—An attorney may not divulge confidential communications of his clients or the advice given thereon.—167 N. Y. S. 767.

Secret Profits.—Copartners and joint adventurers are accountable to each other for secret profits. An agent is liable to his principal for secret profits.—167 N. Y. S. 966.

Parent's Right to Child's Wages.—The parent is still entitled to a minor's services and wages until the latter attains the age of twenty-one, unless he is sooner emancipated.—1002 A. (N. J.) 395.

Draft for Army Purposes.—Regardless of treaties, Congress has power to subject all residents of the United States to draft for army purposes, without respect to citizenship or alienage.—245 F. (U. S.) 871.

Object of Exemption Statutes.—Exemption laws are not intended simply for the protection of the debtor, but primarily for the protection of his family, and such statutes will be liberally construed.—165 N. W. (Iowa) 337.

Selling Goods as Those of Another.—A man has a right to sell his own product to anybody that wants to buy it, but he has no right to put forth his goods as those of another, so as to get the advantage of such other man's trade.—245 F. (U. S.) 907.

"Pension"—"Compensation."—The words "pension" and "compensation" are not synonymous; the former being ordinarily a gratuity from the government or some of its subordinate agencies in recognition of, but not in payment for, past services.—165 N. W. (Iowa) 387.

Unfair Competition.—A manufacturer is chargeable with knowledge of the inevitable consequences of imitating the dress of an older and competing product and is open to the inferences that it intends its product to be confused with that of its competitor.—245 F. (U. S.) 824.

Mere Complaint Not a Rejection of Goods.—Acceptance of goods sold is indicated by exercise of acts of ownership; but if the article is not in accordance with contract, the purchaser must offer to return them, and mere complaint of the defect is not rejection.—117 N. E. (N. Y.) 941.

Increasing Fire Hazard.—The mere fact that the erection of a building near to or adjacent to that of another will increase the fire hazard or enhance the insurance rate on such other building is not of itself ground to enjoin the erection as for the prevention of a nuisance.—198 S. W. (Tex.) 1069.

Fidelity Insurance.—A fidelity company guaranteeing the honesty of persons holding places of trust and the performance of contracts and undertakings is an insurance company, and the same rules of construction must apply thereto as apply to other insurance contracts.—198 S. W. (Tex.) 10092.

Loss by Explosion.—Even if a policy contains the usual exemptions from loss for damage by explosion of any kind, unless fire ensues, and in that event for damage by fire only, if the explosion was an incident to a fire insured against, the insurer is liable for all the loss, both that caused by the fire and the explosion.—167 N. Y. S. 707.

Evidence of Mental Disease.—Failure of memory, resulting from old age or sickness, forgetfulness of names of persons testator has known, idle questionings requiring repetitions of information, and personal eccentricities and oddities are not evidence of mental disease and deterioration rendering testator incapable of disposing of his property by will.—198 S. W. (Mo.) 833.

Failure to Read Contract Before Signing.—Where one who can read and write executes or receives an instrument, he is, in the absence of misrepresentation, fraud, or deceit, bound by it, and the fact that he did not read it or was ignorant of its contents is no defense, for he should have read it, or have made proper inquiry as to its contents, and, failing to do so, must take the consequences.—76 So. (Ala.) 973.

Interest on Past Due Bills.—Where it was agreed between a seller and buyer of goods that on bills past-due interest should be an interest charged at the rate of six per cent., the buyer's payment and the seller's acceptance of the amount due on an overdue account does not preclude recovery of interest; the payment not being accepted in satisfaction of the entire claim as provided for in Revisal 1905, Sec. 859.—94 S. E. (N. C.) 520.

Recovery of Money Lost in Gambling.—A third person whose money without his consent or connivance, has been lost at gambling by another, may recover same in an action at law against the person or persons winning and receiving the same; and all persons concerned in conducting a system of gambling, whether as principals or agents, by which such money is so lost, may be made to respond in damages to the the owner of the money to the extent of the amount so lost.—107 P. (Okla.) 202.

Rights by Employers to Union Labor.—The right of an employer to make non-membership in a union a condition of employment is a part of the constitutional rights of personal liberty and private property which cannot be taken away even by legislation, unless through some proper exercise of the paramount police power. Workingmen have a right to form unions and to enlarge their membership by inviting other workingmen to join, but this right, like all other rights, must be exercised with reasonable regard for the conflicting rights of others.—38 Sup. Ct.(U. S.) 65.

"Marshaling Assets."—The doctrine of "marshaling assets" in behalf of legatees, distributees, and creditors rests upon the equitable rule that, where a claimant has a right in the nature of a lien to two funds to which he may resort, and another claimant has an interest in only one of them, the last claimant may compel the former to exhaust the fund to which the second cannot resort before coming upon the one available to both. A creditor who can hold two funds is not required to address himself first to that fund which he alone can claim, when to do so would result in unreasonable delay or inconvenience, or would involve litigation in the collection of his debts.—117 N. E. (Mass.) 899.

RULING ON ALCOHOL FOR HOMEOPATHS

Physicians Must File Bond and Obtain Permits—Homeopathic Pharmacists Not Allowed to Manufacture Potencies With Non-Beverage Alcohol Unless Regulations Are Observed

Washington advices are to the effect that questions before the Internal Revenue Bureau of the Treasury Department under the food control act of August 10 and the war revenue act of October 3, 1917, contest the right of homeopathic pharmacists to manufacture and sell so-called potencies, attenuations or dilutions with non-beverage alcohol to homeopathic physicians and others unless the physicians and other users file bond and obtain permits, as required by Treasury Department regulations.

The Commissioner of Internal Revenue has ruled that homeopathic pharmacists, in order to obtain and use non-beverage alcohol in the manufacture of such potencies, attenuations or dilutions, or sell the same, are required to make application and obtain permit and give the required bond in the same manner as any other user or dealer in non-beverage alcohol. Such pharmacists, in order to obtain and use non-beverage alcohol, must, under any circumstances, qualify by filing bond and obtaining permits regardless of the manufacture and sale of the dilutions. Special tax must be paid as a retail or wholesale liquor dealer by the pharmacist covering the sale of alcohol and dilutions.

Any physician or other person desiring to purchase or use such attenuations, potencies or dilutions or the non-beverage alcohol for making the same, must likewise qualify by filing bond and obtaining permit, except that a homeopathic physician or any other person may obtain from the pharmacist not exceeding two drachms of any attenuation, potency or dilution at one time without filing bond and obtaining permit.

The ruling as to the use and sale and the right to manufacture such dilutions, potencies or attenuations, places the homeopathic pharmacist or physician and user of the dilutions, potencies or attenuations in practically the same position as pharmacists and physicians of other schools.

Manufacturers of Jamaica Ginger will not be issued permits covering the use of non-beverage alcohol in the manufacture thereof unless the same is made in accordance with the process prescribed in the United States Pharmacopoeia. Manufacturers of alcoholic preparations which it is possible to use internally, such as flavoring extracts, must, wherever standard process of manufacture is prescribed by the Secretary of Agriculture, use such process.

Where other processes of manufacture are followed and the right to use non-beverage alcohol is claimed, the manufacturer will furnish, in duplicate, the information called for by the Treasury regulations as in the case of alcoholic medicinal compounds for internal use which do not conform to the U. S. P. or N. F. Samples of the product will be required, when doubt exists as to the non-beverage character of same.

Such United States Pharmacopoeia or National Formulary preparations as aromatic elixirs, aromatic tinctures and similar preparations which are used by pharmacists principally as vehicles, and which are potable, may be made with non-beverage alcohol and sold in good faith for legitimate uses, it is ruled, but the container must bear a label upon which shall appear the following statement: "This preparation has been made with non-beverage alcohol, and the sale or use thereof for beverage purposes will render the vendor or user liable to severe penalties."

FORMOSA'S OPIUM CROP

When Japan annexed the island of Formosa, many of the native Chinese were addicted to the use of opium in the proportion of about 60,000 males and 10,000 females. An act was promulgated making opium a Government monopoly and all addicted to the drug were obliged to obtain licenses. The opium is distributed to wholesale and retail dealers. In 1900 there were 152,950 males licensed and 12,802 females. In 1916 there were 57,829 males and 9,000 females.

The monopoly bureau obtains its raw product from India, Persia, and Turkey. Since the war there have been no importations from Turkey, the greater part (all in 1916)) being purchased from Persia. Only about 25 acres are devoted to opium poppy cultivation in Taiwan. Opium powder is obtained by the monopoly bureau from the sanitary bureau of the Home Office of Japan. The opium manufactured by the Taiwan Monopoly Bureau is divided into two grades (formerly three, but since 1907 there has been no demand for the so-called second grade), the present prices being 28 yen (normal exchange value of yen is $0.4985) for first grade and 20 yen for third grade per tin containing 100 momme (about 13 ounces) of opium paste.

At first the proportion of demand among consumers was 10, 20, and 70 for the first, second, and third grades, respectively, but gradually the best grade increased in demand, the present proportion of sale being about 92 for first grade and 8 for second. Those who give up smoking are invariably the ones who are least addicted to the drug. With increased use of the higher-priced quality the revenue derived from the opium monopoly actually shows an increase. The director states that no opium is exported from Taiwan. The revenue in 1916 was $3,070,485.

CONSERVATION IN PHARMACY

Washington advices state there will be no effort by the General Medical Board of the Council of National Defense to secure the conservation of sugar and alcohol in medicinal products, according to Dr. Franklin Martin, chairman of the board. The question has been under consideration by the board for several weeks, as well as that of conserving glycerin.

It has been declared that Governmental and other authorities interested, realizing that careful consideration should be given the subject, recently met and debated the advisability and necessity of conservation measures from the standpoint of medical needs. In view of the importance of alcohol, sugar and glycerin in the manufacture of pharmaceutical preparations and of the limited possibilities for the conservation of alcohol and sugar therein, it has been deemed advisable to refrain at this time from recommending conservation, of sugar and alcohol insofar as their use in pharmaceutical preparations is concerned.

The amount of glycerin used in medicine, when compared to the available supply, was found to be relatively large and a committee has been appointed to investigate formulae, manufacturing processes, etc., requiring glycerin, and to submit plans for the curtailment of the quantity now used in case future developments should make it necessary to adopt conservation measures in relation to medicines.

Dr. John Helmke 83 years old, who formerly conducted a drug store in Louisville, Ky., died recently from bronchial pneumonia.

Samuel L. Bellman, a prominent druggist of Lawrenceville, Pa., died at his home there recently. Born at Wheeling, W. Va. in 1862, he went to Pittsburg 32 years ago to engage in the drug business. His widow and a daughter survive.

PROGRAMME OF A. PH. A. CONVENTION

A brief synopsis of the programme planned for the sixty-sixth annual convention of the American Pharmaceutical Association at Chicago, Aug. 12-17, and for the meeting of the American Conference of Pharmaceutical Faculties and the National Association of Boards of Pharmacy which will be held immediately preceding that of the A. Ph. A. has been announced. It follows:

Monday, Aug. 12.—Meeting of the National Association of Boards of Pharmacy and American Conference of Pharmaceutical Faculties.

Tuesday, Aug. 13.—Second session of N. A. B. P. and A. C. Ph. F. Trip to Municipal Pier and luncheon. Card party for ladies. Address of president of A. Ph. A. Nomination of officers.

Wednesday, Aug. 14.—Session of A. Ph. A. Section sessions. Dinner of alumni organizations. Theatre party for ladies. President's reception and ball.

Thursday, Aug. 15.—Session of A. Ph. A. Section sessions. Automobile ride. Banquet.

Friday, Aug. 16.—Sessions of A. Ph. A. Section sessions. Election of officers.

Saturday, Aug. 17.—Closing session.

NEW JOURNAL TO COVER PHARMACOGNOSY

At the Pittsburgh meeting of the Botanical Society of America, a movement was instituted looking forward to the publication of a journal to be known as *Botanical Abstracts* to be international in scope and botanical in the broad sense. Prof. B. B. Livingston, of Johns Hopkins University, Baltimore, was elected as editor in chief. Among the departments to be recognized is that of pharmocognosy, Prof. Henry Kraemer of the University of Michigan being elected associate editor of this section. This is the first time that pharmacognosy has received the scientific recognition that the work of its investigators have merited, and it means for higher efficiency among students in pharmacognosy and a corresponding benefit to pharmacy. In asking for the cooperation of his colleagues in preparing abstracts of every pharmacognostical paper published since the beginning of the year, Dr. Kraemer states that great opportunities are ahead and that everyone has a service to render to the men of science in the world. It is becoming more and more apparent that we in this country must assume something of the role of leadership whether we wish it or not. The first issue of the new journal will soon be published, and it is planned to be a double number for January and February, 1918. After that it is intended to get out monthly numbers at monthly intervals until the full series of twelve issues for 1918 is completed.

PLATINUM OUTPUT IN 1917

According to figures compiled by J. M. Hill, of the United States Geological Survey, Department of the Interior, only 605 ounces of crude platinum was sold by placer mines in 1917. This is less than the sales in 1916 by about 100 ounces. The imports of crude platinum amounted to 31,921 ounces, not counting the 21,000 ounces of Russian crude platinum which was received by the Government late in December.

During 1917 refiners made about 33,000 ounces of platinum, 4,800 ounces of palladium, 833 ounces of osmiridium, and 210 ounces of iridium, which can be called "new metals." Of this amount about 7,400 ounces probably originated from domestic materials.

The saving of scrap platinum of all classes resulted in much larger recoveries of secondary platinum metals than in previous years, a total of 72,000 ounces being recovered, as compared with 48,000 ounces in 1916.

CITRIC ACID PRODUCTION IN U. S.

Tariff Commission Reports That the Output Is Increasing—California Fruit Growers Interested—Product on the List of Restricted Imports

War has encouraged the production of citric acid in the United States, according to a preliminary report on this industry just made by the United States Tariff Commission. Quantities of this acid were previous to the war imported from Sicily, but the United States has placed it upon the restricted import list. Despite this action the price of the acid, it was said, was held firm by the control exercised by the Italian Citrus Chamber. Nevertheless the price rose and in January of this year was about twice the price commanded previous to the war.

The Tariff Commission stated that it had given special study of citric acid in connection with its investigations of the chemical industries. Sicily in the past has practically supplied the world with citrate of lime, the raw material from which citric acid is obtained. The product offers a convenient and profitable utilization of the culls and inferior fruit of the great Sicilian lemon industry. Italy exported almost 15,000,000 pounds of citrate in 1915, two-fifths of which was consumed in the United States. In 1917 the imports of citrate of lime into the United States amounted to 6,361,458 pounds. The War Trade Board placed citrate of lime on its first list of restricted imports. A special license for each importation must be secured in advance and this license will only be granted on return cargoes from European points and then only upon condition that the material be loaded from a convenient port and without delay.

The Federal census reported the production of 2,729,943 pounds of citric acid in 1914, which was but a slight increase over the figures reported in 1904 and 1909. As one might judge roughly from the import statistics for the raw material, however, production increased tremendously in 1915. The statistics reported by the Tariff Commission show that in 1915 the United States produced 3,417,795 pounds of citric acid; in 1916, 4,182,478 pounds, and in 1917, 4,032,897 pounds.

The California lemon growers entered into active competition in 1915, when the Californian Fruit Growers' Exchange established a co-operative plant for the recovery of the by-products of the lemon industry. No product was reported until 1916, and although considerable progress has been made, the Californian industry has not as yet offered serious competition to the Sicilian producers of citric acid. The Bureau of Chemistry of the Department of Agriculture has been interested in the citrus industry, and has a special laboratory in California engaged in the study of its problems.

The price of citric acid since the war began has not been subject to the radical fluctuations noticeable in many of the chemicals, principally because of the controlling influence of the Italian Citrus Chamber. There has been a gradual but material increase, however, and in January, 1918, citric acid was selling for about twice the price quoted in January, 1913. Very recently the Government has come into the market for considerable quantities of citric acid, and this, combined with the import restrictions on the raw materials, has caused the market to be particularly unsteady. Second hands have recently demanded as much as a dollar a pound, although the manufacturers on May 22 were quoting citric acid at 82c.

The United Drug Company has declared a quarterly dividend of 1½ per cent. on the second preferred stock, payable June 1 to stockholders of record May 15.

MUST NOT FIX RESALE PRICES

Federal Trade Commission Decides Against Manufacturers who Seek to Check Price Cutting—Case of Chester Kent & Co., of Boston

The Federal Trade Commission in deciding the case against Chester Kent & Co., Inc., of Boston, involving the right of the company to fix the resale price of its goods by agreement and to refuse to sell to dealers who fail to adhere to such prices, has issued an order which forbids the company to follow any of the methods heretofore practiced by manufacturers who insist upon price-fixing contracts.

Attorneys for the company admitted that in the past the practices complained of had been in use. The order, the first in cases of this character, forbids the company to—

(a) Indicate to dealers the prices for which its proprietary or patent medicines shall be resold.

(b) Securing agreements from dealers to adhere to such prices.

(c) Refusing to sell to dealers who fail to adhere to such prices.

(d) Refusing to sell to dealers who fail to adhere to such prices upon the same terms as dealers who do so adhere.

(e) Furnishing any advantage to dealers who adhere to the resale prices, while refusing similar treatment to dealers who do not adhere to the prices.

This order of the commission follows the decision of the Supreme Court of the United States in the American Graphophone Co. case lately decided by it.

Some of the most distinguished lawyers in the United States have appeared before the commission to argue this question, as well as many of the leading business concerns of the country, some of whom have insisted that the maintenance of resale prices was proper, and others who have contended that it was not. Almost all of the large department stores of the country have been heard in opposition to it.

After full consideration the Federal Trade Commission has decided to issue complaints against all business concerns who refuse to sell unless the purchaser will agree to maintain a resale price fixed by the seller. The case just decided is the first formal finding by the commission to that effect. When once an article has passed from the maker to a purchaser he owns it, and the owner of such article may sell it at any price that he chooses, provided he does not himself sell it at such price as to be below cost, and thus thereby enter into unfair competition with other retailers selling the same article.

The decision will lead to considerable controversy in relation to the subject matter thereof, and the matter will probably have to be settled by an act of Congress in the manner suggested by Mr. Justice Brandeis in his concurring opinion in the Supreme Court of the United States, in the case of the American Graphophone Co. The Stephens bill, which is now in Congress, is in relation to that matter, but in the estimation of many business men and others it is thought to be broader than it should be. It may be that resale prices can be so regulated by placing the power somewhere protecting against unfair prices as to make it work equitably, and be a fair method of competition in commerce, but that question will undoubtedly have to be settled by congressional action.

CENSUS OF DRUG ADDICTS

In order to determine more accurately than has ever been done heretofore the number and distribution of drug addicts in the United States, the Commissioner of Internal Revenue has requested every physician registered under the Harrison Narcotic Law to report the number of drug addicts for whom he prescribed or whom he treated, during the calendar year 1917. The information called for includes the number of male addicts between the ages of 21 and 31 inclusive, and the total number of female addicts of all ages. The questionaire sent out calls for the name and address of every male addict between the ages of 21 and 31 inclusive, which represents practically all males within the draft age.

The term "drug addict" is defined as meaning "any person who is a confirmed user of opium or coca leaves, their salts, derivatives, or preparations." The information called for is said to be absolutely necessary for the use of the government in its work incident to the war, and strictest confidence is promised.

LARGEST RED CROSS UNIT IN THE UNITED STATES

Comprising more than nine hundred members, the Red Cross Unit of Parke, Davis & Co., is said to he the largest unit of that organization in the United States. After the day's work, three times a week, the young ladies meet in the women's recreation rooms in the Detroit laboratories of the company. After a luncheon, provided by the house, two hours (from 5.30 to 7.30) are devoted to Red Cross activities. That the workroom is a "beehive of industry" is shown by the serious expression on the faces of the ladies reproduced in the above illustration.

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THE ELI LILLY & CO. COMPLAINT

Following the decision of the Federal Trade Commission against Chester Kent & Co., in which the right of that company to fix the resale price of its goods by agreement and to refuse to sell to dealers who fail to adhere to such prices was denied, is the news of the complaint against Eli Lilly & Co., pharmaceutical manufacturers of Indianapolis. As told on another page of this issue of the ERA, violations of the Federal Trade Commission Act through unfair methods of competition are charged in that by fixing the prices at which the drugs the company manufactures shall be resold by jobbers and wholesalers, competition between dealers in the wholesale trade will be thus eliminated.

As will be noted, the allegations in the complaint, besides the charge of fixing prices, cover discrimination in prices between different customers, including the giving of a rebate upon such prices on the condition or understanding that the purchaser shall not use the goods and wares of competitors of the company. The effect of this practice, it is contended, is to lessen competition and tends to create a monopoly.

To what extent these allegations will be maintained remains to be determined, but in the charges set forth, as in those which appeared in the proceedings of the Chester Kent & Co. case, there is apparent an intention of the Federal Trade Commission to force absolutely open prices on goods, whether sold by retailer, jobber, or manufacturer. Should this principle be upheld it will destroy many established customs in the drug trade, and prevent manufacturers of proprietary goods and chemicals, as well as the pharmaceutical houses, from dictating the prices at which the jobber shall sell their products. If the courts go further and prohibit manufacturers from selecting the houses to whom they shall allow their jobbing discounts and prices, such a decision would in effect, establish open trading with lowest prices to all who can buy the quantity. Such a decision would undoubtedly be favorably regarded by the organizations known as "co-operative buying clubs," while the large retailer who would or could buy a few things in quantity would be able to buy as cheaply as any other purchaser of a like quantity, regardless of the character of his business or whether the most of his trading is done over the retail counter. The principles thus set forth go far to show that much study of modern distributive processes and methods of selling will be needed to adjust the various factors and angles of price-maintenance to the ideals of free competition. The future of successful legislation in this direction may yet be a long way off.

COLLEGE OF PHARMACY LIBRARIES

At no time in history have the uses of libraries for technical training been so obvious as at the present, for war with its infinite detail of preparation and training has made recourse to the printed page for every record which has a bearing upon a given subject. If a worker or specialist in any line is to get the benefit of what others in a similar line have done before him, he must have at command the technical literature of his calling. There he will find the history of whatever has been written about his line of work, and if he does not familiarize himself with this information, he is sailing forth into an ocean whose points may be fixed but for him they remain uncharted. That he should know of the work that has been done by others is imperative, and to this end a library containing all the current knowledge of a given field is one of the greatest needs of modern times.

To the worker in the pharmaceutical field, the use of a library is no less important, and far-seeing men like the late Dr. Charles Rice and Prof. A. B. Prescott were exactly right when they contended that every student should begin to form a library contemporaneously with beginning to learn pharmacy. In other words, the student should grow up with his books, and the better he knows them, the better will he know them as sources from which he can draw information when he most needs it. His library collected in this way, if used as it should be used, is sure to have a most distinct bearing upon his future occupation, for its use will deepen his impressions, improve his ideas, and bring to him the best professional assistance.

To the research worker, the ordinary reference library of the pharmacy is far from sufficient, and to provide this help adequately calls for an outlay the average individual can scarcely afford. But fortunately there exist in many colleges and university schools pharmaceutical libraries more or less complete, which can be drawn upon for some information, but in many cases the collections of this literature are neither sufficiently comprehensive or arranged to expedite the time of the research worker who would make use of them. If the demands of specialists in any line of investigation are worth anything, they surely emphasise the necessity of maintaining adequately equipped libraries by colleges of pharmacy. Those institutions which have not already done so should begin at once to reorganize and build up these departments for reference work and make them real adjuncts to the teaching equipment. As work in the laboratory supplements the principles expounded by the instructor, so the library in its comprehensiveness can be made to assist the advanced worker by throwing light on the particular problems with which he is struggling.

OBSERVING WARTIME REGULATIONS

War time regulations impose upon the druggist certain responsibilities, which at other times and under other circumstances would seem to be burdensome, but in the present emergency he will, like the good citizen he is, do his best to observe and closely follow all of the instructions that have been issued for the general well-being of the country. To do this intelligently requires that he keep himself posted as to the character and scope of the regulations. In a broad way these attach to various phases of his business, as the use and sale of non-beverage alcohol, the purchase and sale of ingredients which may be used in making explosives, restrictions in the use of sugar for other than medicinal preparations, etc.

Under normal conditions, any one of these regulations would tend to change the ordinary routine of pharmaceutical practice, but now the druggist must be prepared to meet the new conditions and observe the instructions to the letter. He should know that he cannot legally purchase, use or sell non-beverage alcohol without a special permit from the proper authorities, and that he cannot legally sell a physician non-beverage alcohol to use in his practice unless the physician holds a permit from the Government and then makes a requisition on the druggist, using the triplicate blanks for the purpose which are provided by the internal revenue authorities. That the observance of this law is most important is obvious from the fact that its violation is punishable by a fine of not more than $5,000, or imprisonment for not more than two years, or both fine and imprisonment.

Another war time regulation which the druggist should thoroughly understand is that relating to the sale of ingredients which enter into the manufacture of explosives, which are just as important in respect to the storage, use or sale of manufactured explosives. The Bureau of Mines has made a special appeal to druggists to use every safeguard in handling such ingredients, in order that the objects of the law may not be defeated by our enemies. The druggist must first secure a license from the licensing officer in his locality, applying therefor in person and making oath to the correctness of the statements in his application. Before delivering any of the ingredients of explosives listed in the regulation, the druggist must see that the would-be purchaser has a permit from the proper authorities to receive such articles, which may be used for legitimate purposes only. To carry out the intent of all of the Government's wartime regulations is the patriotic duty of every pharmacist.

The Connecticut State Board of Pharmacy has organized with these officers: Harvey P. Bissell of Ridgefield, president; J. W. Marskand of New Britain, vice-president; H. M. Lerou of Norwich, secretary and treasurer.

Securing Prestige for Women Pharmacists

By **EMMA GARY WALLACE**

To fill up the places in the ranks made vacant by proprietors and clerks who have been called upon to serve their country, has placed an unexpected demand upon women pharmacists. Heretofore the number of women engaged in pharmacy has not been large, and the public generally has not been trained to look upon them in the light of professional pharmacists. To help secure for women so qualified the recognition and prestige of real pharmacists is the purpose of the author of this article, whose knowledge of the activities of women in this direction and the needs of pharmacy, enables her to offer some pertinent suggestions toward attaining this object.

EVEN although the number of women pharmacists is constantly increasing, yet some localities are still unfamiliar with the idea of a woman competent to prepare and dispense medicines. In their minds, she is likely to be classed with the girl who sells toilet sundries in the drug store and the department store, or even the capable young woman who presides over the house furnishing supplies in a near-by hardware store. As yet many people have not grown accustomed to differentiating the woman pharmacist as a *professionally trained worker* from her sister in other lines who merely gathers up such experience as she can as she goes along.

It is very important that for her own sake, the woman pharmacist shall take her rightful place *now*. Upon her must devolve the filling up of depleted pharmaceutical ranks, and for the sake of the public, the profession, and her own individual future, she must not hesitate to take dignified, legitimate means to establish confidence in her ability to serve efficiently. It is likewise important that all women pharmacists appreciate this most important fact and associate themselves with organized bodies of pharmacists wherever possible, in order to promote and maintain the morale of the profession as a whole.

When Doubts Exist

It is not to be wondered at that a community which has known little of the woman pharmacist, should not take the trouble to reason the matter out for itself as to her standing. If she simply appears behind the drug store counter with no one to introduce her or sponsor her, customers have no way of placing her, and resentment should not rightly be felt toward them because they do not do so.

More than one woman pharmacist has complained to me that the public has not taken her as seriously, as her study and experience warranted. Now let us look matters squarely in the face.

How was the public supposed *to know*, in most cases? We cannot help but wonder if anything was done *to introduce* these workers *and place them upon a proper footing*.

If a woman opens a pharmacy for herself, she usually receives enough publicity, free or paid for or both, that people know of her,—her name, training, business location, special lines of service, etc. It is *her own place* to see that she has the right sort of a public introduction. A membership in the local Chamber of Commerce, the right kind of advertising, and identification with local institutions, will all bring this about. But where a young woman comes as an employee, the *matter* of introduction is much more likely to be overlooked. And I would suggest that employers of young women pharmacists in towns, small and medium-sized cities, will in future take pains to overcome the *indefiniteness* of the position of the woman prescriptionist.

This is easily enough done. Secure a newspaper write-up with a picture of the young lady, telling where she studied, any honors she won, where her experience has been gained, the special qualifications of young women for pharmacy, and mention in closing that the Purity Pharmacy has been exceedingly fortunate in obtaining her services.

It would also be well to drop the reassuring suggestion that most of our large and important hospital pharmacies are in charge of women, as they have been found so conscientious and dependable. The picture will have a distinct value in helping people identify her who come into the store afterwards, and the write-up will be read and remembered by many.

In almost every place of any size, there are a few professional women,—physicians, chemists, lawyers, etc. Many times these specially trained women have an organization of their own. It may be called the College or University Club, or given a less characteristic name, but where such an organization exists, *an effort* should be made to recommend the woman pharmacist's *name for membership*. This will at once give her a professional standing among women which would take a long time to gain otherwise. Usually the matter can be arranged easily through a woman physician or some one of the number who is personally known to the proprietor of the drug store.

I would also suggest that the head of the business take pains to introduce his fully qualified associate in business, to professional people and his regular customers when it is convenient to do so. We cannot expect people to pay any more deference to and appreciation of our fellow workers and the members of our family circle, than we do ourselves. In fact once the employer of the young woman pharmacist begins to think of his *duty* and *opportunity*, he will see how he can aid materially in helping give her a standing in the community. This is true even although the young woman may have been born and bred in the locality.

Ethical Prestige of the Store

The ethical prestice of the store demands attention to this point, because no proprietor wants the impression to go out that he is letting untrained, irresponsible girls handle medicines for the sick, or dispense supplies for the well. Remember then, Mr. Employer, that *you* have a duty, and the better you do it, the better for business and the more thoroughly will the young woman be impressed with her own responsibility to make good.

The young woman herself must be ready to go half way, being modestly professional and womanly at all times in her manner. Her dress must be that of the business woman of discrimination, and her preparation entirely adequate to the calls upon it. Nothing shakes confidence more than a plain evidence in speech and act that one is not sure of one's ground.

Class Appeal

It might seem to be enough for the employer to do his part and the employed to do hers, but this is the day not only of individual initiative, but of team work as well, and so a valuable opportunity is overlooked if some plan is not outlined and followed to establish confidence and pleasant relationships between the woman pharmacist and the doctors of the community, hospitals and institutions, housewives, mothers, nurses, and the public generally. Let me illustrate what I mean.

Let the young lady pharmacist make up an exceptionally fine, handsome elixir or tincture,—one which is according to standard U. S. P. specifications and in frequent demand. Sample the doctors with it, either through a personal call or some special method of delivery, accompanied by a note which says something breezy like this:

> Dear Dr. Greatheart:
>
> Did you ever see a finer tincture than this? We have been making and handling tinctures for twenty years, and we do not believe this can be improved upon. It was made by Miss Mary Winters, our new pharmaceutical assistant—took honors in her college course, and has had the advantage of very fine laboratory training.
>
> If you have any pet ideas in connection with your prescription trade, let Miss Winters work them out for you. She has some suggestions of her own you will be glad to hear, too!
>
> Remember this is the store where you are always welcome and we are happy to do our best to please you.
>
> Sincerely,

Or, it may be a circular letter which is especially seasonable and directed to housewives, which mentions Miss Winters and her study of botany, bacteriology, etc., and suggests how glad she will be to meet the women customers of the store and render any service in her power. Below this a listing of plant foods, insect powder, germicidal soaps, and simple home remedies will be appropriate.

Another letter to mothers from the angle of the care and scientific feeding of the child, will attract attention. A letter to nurses pointing out Miss Winters' readiness to co-operate with them at any time and in any way in her power for their comfort and better results in their work, will be a pleasure. This class appeal may be followed out so that *definite groups of people* will feel an interest in the young woman and desire to meet her and to be served by her.

All of this would not be worth-while if the period of employment was to be two or three months, but provided a definite contract for a year could be made, after perhaps a probationary two weeks or a month, then it would count in winning friends and holding them, for a department of service would be established which a woman could best make distinctive and permanent.

Think this over. We are at the entrance to rapidly changing conditions. We must adapt ourselves to them. And if we do it with far-sighted intelligence, the years which are just ahead will give back to pharmacy much of the professional prestige which had unwittingly slipped away.

CONSCIENTIOUSNESS IN DISPENSING*

By OTTO RAUBENHEIMER, Ph.M., Brooklyn N. Y.

"Many roads lead to Rome," and undoubtedly many methods will increase prescription dispensing. The one which I consider best, in fact very best, a method "par excellence," is "Conscientiousness."

The dictionary definition for conscientious is "influenced by conscience, governed by or conformed to a strict regard to the dictates of conscience, or by known rules of right or wrong." The definition for conscience is as follows; "sense of moral goodness of one's own conduct, intentions of character together with a feeling of obligation to do or be that which is recognized as good."

Applied to dispensing it simply means that the conscientious, the scrupulous pharmacist fills the prescription correctly. To obtain such a reputation among the medical profession and the public in general should be the chief aim of the pharmacist who makes prescription compounding his specialty. The writer in his lectures on dispensing pharmacy in The New Jersey College of Pharmacy at Newark takes special pains to emphasize this very point and to impress it forcibly on his students.

Let the pharmacist who wants to increase his prescription department adopt the motto:

PRESCRIPTION COMPOUNDED
CAREFULLY AND CONSCIENTIOUSLY

Circulate this story among physicians and the public and it will place you into a separate and higher class, and it will surely increase your prescription business.

Above all live up to this motto!

Under the trade name of "satolite," a successful incombustible substitute for celluloid manufactured from soya bean cake, has been devised by Prof. S. Sato of Japan. It is said to be a galalith made of the glucine of soya bean, coagulated by formaline. and to have several advantages for industrial use not possessed by ordinary celluloid.

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*Read before the New Jersey Pharmaceutical Association, 1918, and contributed by the author.

Chemistry and Kultur

Thefts and Propaganda That Have Inflated Germany's Reputation as Chemical Headquarters of the Whole World

Chemistry as an art has always lent its aid to the great purposes of civilization, and the student of the economic progress of mankind has been quick to recognize the intimate connection of this art with the advancement of nearly every branch of manufacturing industry throughout the world. Pharmacy owes much to the investigations of the chemist, but not all of the discoveries in chemistry have originated in the country of the Teuton, as many savants of that nationality would have us believe. In the application of these discoveries Germany has made a great record, but as a wellknown contributor of the Era *points out in his article, it is time "that American pharmacists should appreciate that German chemistry is not supreme either in the field of pure science or in its commercial application."*

PHARMACISTS know chemistry, and it might reasonably be presupposed that they would not be easily misled by a carefully inflated reputation in respect of that noble branch of science; but paradoxical as it seems, it has been their very knowledge of chemistry and of chemical literature that seems to have rendered them the more susceptible to a carefully planned and skilfully worked out propaganda to make the world believe that Germany is absolutely supreme in all the wide and diverse fields of this science. "The man in the street" believes that the German chemist is the best chemist in existence because our American chemists have told him so. Our American men of science have believed that German chemistry is supreme, because Germans have made this claim for years. "Saying so does not make it so," and it is remarkable, when the facts are examined, how very little we really owe to all of Germany's loudly boasted knowledge of, and work in, chemistry.

Many pharmacists, for example, will be surprised to learn that less than ten of the one hundred and one elements now recognized were first discovered by a German, and that of the German-discovered elements one only (aluminum, isolated by Wohler in 1828) is common. Not a single element of air, water, or common salt was discovered by a German chemist. Oxygen was discovered by Priestley; nitrogen by Rutherford; carbon dioxide by Black; helium, krypton, neon, and xenon by Ramsay, Crookes, Lockyer, and Rayleigh; hydrogen by Cavendish; sodium by Davy—all of these men are Britishers—while chlorine was first isolated by Scheele, the famous Swede.

Not a single one of the so-called laws of chemistry, the twenty-one fundamental principles upon which the whole theory and practice of the science are founded, was discovered by a German, and only one of the great chemical theories was first advanced by a German chemist.

According to Buckley's "History of the Natural Sciences," of the thirty chief men of science of the Seventeenth Century only three were Germans, and but three of the twenty-seven leaders of the Eighteenth Century. If a German chemical apologist were to explain, as he doubtless would attempt to do, that German chemistry is modern, he might be answered that the most important chemical element recently isolated is radium, discovered by a Frenchwoman, and in the fields of colloidal and electrical chemistry the recent important discoveries have all been made in England, France, and America—not in Germany.

It is something of a shock to discover that the nation that has had the reputation of being the most advanced in this science has contributed to the sum of its knowledge not a single one of its laws, the discovery of less than ten per cent. of all the elements—and of these only one that is common or useful—and less than one-tenth of the great men who may be said to have created the science itself.

Nor does German achievement in the strictly industrial, practical application of pure chemistry, either in the arts, the sciences of medicine and pharmacy, or in the strictly commercial field prove to be any more brilliant than in the scientific field. In the practical application of chemistry to the every day service of mankind, Germany has long been held up as the very model of successful efficiency and the shock of the discovery of the real facts becomes, therefore, all the more startling.

Coal-tar dyes are, in the popular mind, intimately associated with Germany, and yet not one of the first discoveries of any important class of these dyes was made by a German chemist. Coal-tar itself was first obtained in 1739 by Dr. Clayton, Dean of Kildare. The Earl of Dundonald obtained the first patent for its commercial production; William Murdock made the first coal-tar illuminating gas; naphthalene was discovered by Garden; benzol by Faraday; anthracene by Dumas of France; alizarin by Perkin; toluene by Mansfield; picric acid by Woulfe. Save for the last, none of these names are Teutonic, and even Peter Woulfe was an English chemist who lived and died in London. These are the parent intermediates from which the most important dyes are made, and not one of them was found first in Germany.

Nor is the German record one whit better on the dyes themselves. The very first coal-tar dye manufactured was mauve made by W. H. Perkin. Aniline black was first produced by Lightfoot; fuchsine by Verguin; the first sulphur dye was recorded by Croissant and Brittoniere; spirit-soluble blue by Girard and de Laire; the first true acid dye, sulphonated aniline blue, by Nicholson, who also discovered phosphine, the first yellow dye in 1862; the first azo dye, bismarck brown, was discovered by Martins and Caro; para red by the firm of Holliday; the first sulphide dye by Vidal. German names in this list of basic discoveries are conspicuous by their absence; but is only fair to credit von Baeyer with the discovery of synthetic indigo and Bohn with the making of the first vat dye. These two discoveries, however, important as they are, do not entitle German chemists to the reputation of an exclusive knowledge of all coal-tar dyes.

In explosives too, there is a hazy idea prevalent even among pharmacists that the Germans have been pre-eminent—another notion that the facts demonstrate to be erroneous. Charles E. Monroe, a specialist in explosives, says, "of the sixty-two names of experts on explosives two stand out supreme, those of Abel of England and Bertholet of France." Howard, an English chemist, first made the fulminate of mercury; Schoenbein of Basel, Switzerland, guncotton in 1845; Sobrero of Turin, Italy, nitro-glycerine in 1846; Alfred Nobel of Sweden, dynamite in 1856 and blasting gelatine in 1878; Veille of France, military smokeless powder in 1886; Sir Alfred Abel of England, cordite; Egg, likewise an Englishman, devised the percussion cap; Picford his compatriot, the safety fuse in 1831; and it was Benvenuto Cellini, an Italian, who introduced the blending process in gunpowder; chlorine gas and a dozen other chemicals of modern warfare were not first "Made in Germany."

Few of the most valuable chemical processes were developed by German brains. The Leblanc method of making soda-ash directly from salt was devised by a Frenchman in behalf of his country and named in his honor. The Solvay method, now more generally used, was perfected by a Belgian and bears his name. The soda process for making paper from wood pulp was patented by Watt and Burgess of America. The sulphite process for the production of paper pulp from wood and the method of decomposition of fats by steam at high temperature, largely used in the manufacture of soap, were the work of another American, R. A. Tilghman. The cyanide process of obtaining gold and silver was conceived by our fellow country men, McArthur and Forest. The commercial process of obtaining aluminum was devised by C. M. Hall, also an American, while Cowles of Cleveland, produced aluminum bronze. The process of making carborundum and graphite in commercial quantities was the work of E. G. Acheson. The French and the Americans were the first to manufacture ice by the use of liquid ammonia. The process of hardening fats by the use of hydrogen we owe chiefly to an English firm, Messrs. Crossfield and Son. By their process whale-oil is now converted by large amounts into solid material suitable for the manufacturing of soap. The important contact process which is largely used in the manufacture of sulphuric acid, has been developed upon the observation made as far back as 1831 by P. Phillips, a vinegar merchant of Bristol, that the oxidation of sulphur dioxide is greatly accelerated by the presence of platinum.

The Englishman, John Mercer, taught us to mercerize cotton. The Frenchman, Chardonet, the process of making artificial silk. The method, however, by which most of the imitation or artificial silk is made at the present time is the viscose process invented by the English chemists, Cross and Bevan, in which wood pulp is used. H. Mege of France gave us oleomargarine; malted and condensed milks are distinctively American born and developed products. Hyatt of America gave to the world celluloid. To M. Verneuil of Paris, we are indebted for the artificial ruby, the real ruby of science which is as much the ruby of Ceylon and Burmah as is the water formed by burning hydrogen the water of the rain—identical in property and composition.

Turning now to the application of chemistry to therapeutics the druggist will probably be surprised to learn of the number of discoveries made by men who were not subjects of the Kaiser. Antiseptics we owe to Pasteur and Lister. Dr. Horace Wells, an American, discovered the use of anesthetics. Dr. Jenner, an Englishman, was the first to use vaccine prevention for smallpox. Mothes of Paris invented gelatine capsules, the Tilden Company of New York first produced sugar-coated pills, and Dr. Fuller, another American, introduced tablet triturates. Guthrie, of Sackett's Harbor, N. Y. and Soubeiran in France, discovered chloroform in 1831, while it was first used as an anesthetic by Simpson of Edinburgh in 1847. The alkaloids of cinchona were discovered in France. Frillat, also of France, made the first application of formalin, and saccharine was first synthesized in the laboratory of Johns Hopkins University, Baltimore. Robinet, a Frenchman, isolated codeine and narcotine, and his fellow-countryman, Desfasses, solanine. Takamine, the Japanese chemist, working at Columbia, discovered adrenalin.

The whole system of serum therapy we owe to Pasteur, who discovered the hydrophobia bacillus. Nicolaier of France discovered the lockjaw bacillus; Sternberg, an American, the pneumonia bacillus. Roux, another Frenchman, discovered diphtheria antitoxin. A Japanese physician, Professor Kitasota, discovered the germ of malerial fever, and Sir Ronald Ross worked out its life-history in the mosquito. Typhoid antitoxin was discovered by Sir Almroth Wright. Serobacterins were first demonstrated by Besredha working at the Pasteur Institute. Noon discovered the use of pollen in the immunization of hay fever. The American Flexner isolated the bacillus of infantile paralysis and also developed a serum for cerebrospinal meningitis.

It is a reasonable question to ask how it is that Germany in the popular mind reigns supreme in the whole field of chemistry when, as a matter of fact, German original contributions to the science and its various practical applications do not amount to one-tenth of all the great advances in our knowledge of the science during the last hundred years. The answer is that Germany was the first country to appreciate the practical value of chemistry, and her chemists set to work deliberately to exploit the science for their own ends. German chemists seized upon the discoveries of their professional brethren in all lands, and worked upon them. Germany built up a great chemical literature in which German writers often neglected to give any credit to original research work outside of Germany; but they never failed, however, to advertise extensively every bit of German discovery and the results of every detail of German investigation. German chemists have been well protected by their Government and they have been encouraged by liberal rewards of money and honor. Science and industry have both been handmaidens of Kultur, servants of the Kaiser's empire. It is time that American pharmacists appreciated fully that German chemistry is not supreme either in the field of pure science, or in its commercial application. Recognizing this fact, it is their duty to pass on this knowledge to the laity. Every good thing in chemistry has not been "made in Germany."

PEANUT OIL—ITS USE IN PHARMACY*

By OTTO RAUBENHEIMER, Ph. M., B'klyn, N. Y.

The writer is somewhat responsible for the introduction of sesame oil into the U. S. P. Little did I dream at that time that within a short period, owing to the world's war, this oil would become very scarce, in fact unobtainable, owing to the cessation of seed importation. It is for this reason that I consider it my duty to propose a substitute for sesame oil, in the form of an oil which can be manufactured in unlimited quantities in the United States from a fruit or nut which grows and can be cultivated still more throughout the Southern United States. I have reference to peanut oil, *oleum arachidis;* the expressed oil of the fruit of *Arachis hypogea.*

Peanuts contain as high as 50 per cent. of oil, which sells at wholesale from $1.70 to $3.00 per gallon, according to quality or hot or cold pressing. Only lately a certain brand has been advertised for eating and cooking at $0.90 per quart and $3.35 per gallon at retail. Peanut oil is of a higher grade than cottonseed oil and of a somewhat lower value than first class olive oil. My attention was first called to this oil when I abstracted Farmer's Bulletin No. 431, which abstract is published in Year Book A. Ph. A. Vol. V p. 344.

Linimentum Ammoniae

There is no doubt that the present U. S. P. formula, composed of 3 volumes of sesame oil and 1 volume of ammonia water, produces a far superior preparation than the older recipes containing cottonseed oil. In view of the great scarcity of sesame oil I propose the following substitute formula:

Peanut oil	750 mils
Ammonia water	250 mils

The simple demonstration of agitating 3 volumes of peanut oil and 1 volume of ammonia water will prove to you that a snow-white liniment will be produced. The sample herewith submitted, which is over one month old, shows that the liniment does not separate nor thicken. Further experiments are under way and will be reported in due time.

Linimentum Camphorae

The cottonseed oil in this preparation has been justly and rightly objected to on account of its stickiness. When the formula was under discussion in the last revision of the U. S. P., the writer again set forth his objections in the Sub-committee on Miscellaneous Galenicals. However, without avail. It has been argued that cottonseed oil, an American product of an American seed, must be protected. This very same argument holds true of peanut oil. You will readily notice that 20 per cent of camphor will dissolve in peanut oil during the short time while the bottle passes through the audience and it is unnecessary to employ heat. Besides this, the finished camphorated oil is not sticky, but on the contrary is readily absorbed.

In conclusion I beg to state that my experiments with peanut oil are only in their infancy and will be continued. Let us hope that peanut oil will find a place in pharmacy and that we can thus utilize a product of the United States.

LEFT-HANDED COMPLIMENTS

(*From the New York World*)

Recognition of the valor of American troops in action is always pleasing to their fellow-countrymen, but now and then we meet in the expressions of British and French writers and officers a patronizing tone not so agreeable.

For example, why should a member of the British staff think he was speaking the language of compliment when he said, "The way the Americans have developed as fighters is one of the most amazing features of the war"? We can assure friends and foes alike that nobody on this side of the water has been surprised at any distinguished achievement of the United States forces in France, and that it is the firm belief of most people in this country that our troops were well-developed fighters before they left home.

If they ever fail to maintain their reputation for courage, tenacity, resource and enterprise, that indeed will be one of the most amazing features of the war.

Prof. Charles H. LaWall, recently elected president of the American Pharmaceutical Association, has been elected chairman of the Revision Committee of the United States Pharmacopoeia. The latter position was made vacant by the death of the late Prof. Joseph P. Remington, which occurred on Jan. 1, 1918.

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*Presented at the 1918 meeting of the N. J. Ph. A., and contributed by the author.

[*] Notes on Laboratory Work

By HENRY RODWELL, Ph. C.

A thorough knowledge of the physical characteristics and chemical properties of drugs and materials and a correct performance of the various manipulations required in operative pharmacy are of the utmost importance if the pharmacist is to be anything more than a handler of ready made remedies. In the following paper, the author emphasises the importance of this knowledge and attempts to show the retail druggist how it bears upon his responsibility for the identity and quality of the preparations he sells. A suitable everyday outfit of apparatus is indispensable; with this equipment, plus a practical knowledge of operation, the druggist should be able to control the quality and genuineness of his products and to make his pharmaceutical laboratory pay.

IN contemplating the future of retail pharmacy, it is easy to discern that the trend is not altogether in the direction either of stability or of usefulness. The business of the pharmacist is, in many cases, centrifugal in character—tending to become one that can be discharged piecemeal by others. The fact is regrettable, for, taking the pharmacist at his best, one cannot but be convinced that he is an economic unit whose survival is in the highest degree desirable. Perhaps the worst symptom of this disruptive tendency is the ever-growing practice of depending upon the wholesale manufacturer, and the taking refuge behind his guarantees. It is difficult to see how any claim to professional, or, indeed, to any worthy status can defended if this class of business be deliberately persisted in. The following notes are written in a spirit of protest against this tendency. They are intended for the young pharmacist in the hope that they will be helpful in the manufacturing side of his business.

The Pharmacist's Responsibility

First comes the question of the pharmacist's responsibility for the identity and the quality of the substances handled. It is too much to state that this can be absolute, but so far as it is practicable he should satisfy himself that goods received are what they are labelled, and in all cases where a definite standard exists, verification of quality or strength should not be left to the Food and Drugs officials. The high standard of honor among wholesale druggists has led to the ready acceptance of their guarantees, but it is surely in the interests of his patrons, and of himself, that the retailer should be sure that the high-water mark is reached in every case. It does not greatly matter in the case of substances or preparations with a definite standard whether the wholesale or retail pharmacist is the manufacturer; but it would be well if the retailer were to develop the manufacture of such preparations as can be judged only by examination of the constituent ingredients. For this purpose it is desirable that the drugs be bought in their whole state, as far as this is practicable.

Wholesale Operations

Even the best trained among us occasionally finds himself at a loss when proceeding to make, say, ten times the usual quantity of a preparation, a single quantity of which has presented little or no difficulty. The larger undertaking involves two main considerations—the matter of utensils and the knowledge that the larger quantity will not be controllable, and the product, if it should not turn out altogether satisfactory, will be difficult or perhaps impossible to repair. The discreet pharmacist may, not infrequently, decide to make a series of smaller batches. It is not intended in these notes to deal with methods or processes involving the use of power machinery; only such apparatus will be mentioned as may reasonably be expected to find a place in the retail pharmacist's laboratory.

Useful Apparatus

Assuming that the young pharmacist has at his command the usual everyday outfit of apparatus, it is necessary to mention only such pieces as experience has shown to be too frequently lacking, and which are indispensable for general laboratory work. It would be an impertinence to enlarge upon the merits of the pestle and mortar, but there is a particular form of it that is much too seldom met with in retail pharmacy—the large two-handed kind, the pestle of which is fitted with a stout six-foot shaft. It is difficult to understand why this form is not in general use instead of the large single-handed kind. Its wide range of usefulness, and the thoroughness of the work effected by its means, warrant the statement that it is the most excellent of all pharmaceutical tools. A brief description may not be out of place. Both mortar and head of pestle are of marble. The mortar, having an inside diameter of from 12 to 18 inches, should be sunk deeply into a wooden or brick base, or otherwise firmly seated. From the wall or ceiling, and fixed centrally over the mortar, is a metal ring through which passes loosely the upper end of the shaft of the pestle. The mortar should be arranged at such a height from the floor that full force can be applied when the pestle is gripped just above the head. A diameter of 16in. is recommended.

Another essential is a large-calibre metal mortar, again of the two handed type. Those of small size are something of a delusion. One remembers how, earlier tussles almost forgotten, the small metal mortar was again brought to light, the episode ending, as usual, in some sort of compromise. A metal mortar, to be of real service, should have an inside diameter, measured across the top, of 16 inches, with a pestle weighing some three dozen pounds, which should be suspended from a bracket by means of stout rubber cords. It is necessary to have this piece fixed not on the ground floor, but on the ground itself. Very little can be done without a full set of brass-meshed sieves of the following numbers:—10, 20, 30, 40, 60, and 80. These should be about 14 inches in diameter, and should have wooden rims. A useful form, especially for smaller operations, is a nest of metal-rimmed sieves some 9 inches in diameter, of the same numbers. These should be fitted with a metal receiver. With the mention of the indispensable character of a drying cupboard the list of special apparatus closes. In deciding the question of the size of the cupboard it is necessary to take into account the bulky nature of vegetable drugs, especially of leaves.

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[*] "Pharmaceutical Journal."

Granulation for Tablets

The marble pestle and mortar is of the greatest use in the preparation of granules for tablet-making. From one to four pounds of mixed powders can be moistened in a few minutes, and at a single operation, with a thoroughness that is quite impossible by the use of the ordinary type. The powder is so evenly moistened that it passes through the sieve without choking the mesh and free from fine powder. It would be difficult to imagine a more perfect tool for the purpose. The product is free from the dough-like character that results so frequently from the use of machinery of the masticating order, a character which is altogether undesirable. A No. 20 sieve has been found most suitable for granules intended for tablets of 2 grains or more in weight; when smaller than this a No. 30 is preferable.

Mixing and Sifting Powders

The operation of mixing large quantities of powders demands the utmost care. The method of mixing, then sifting, and finally mixing lightly in a mortar, is probably the best. The final mixing whether in a mortar or by other means, must never be omitted. It should be fully realized that the process of sifting is to some extent one of separation. A well-mixed compound powder becomes more or less unmixed by passing it through a sieve. The ingredients of a compound powder should be, as nearly as possible, of the same degree of fineness. No operation would appear to be more simple than that of sifting. None is, in general, so ill performed. A few remarks on the subject will be ventured. When sifting involves rubbing with the hand or other similar means, it is a distinct advantage to use the sieve with the narrow rim upwards. The operation is thus facilitated and a receptacle is at the same time provided for the portion which passes through. The method is seen to good advantage in preparing granules for tablet-making, the object being to avoid crushing the granules. The chief fault in sifting dry powders is to shake the sieve in such a way that the surface portion of the powder is put into violent motion while that in contact with the mesh moves with the sieve. This may be the result of overloading; more often it is due to the manner of shaking. Perhaps the best movement, if the sieve must be shaken, is to grasp it on each side by the under rim. With the left wrist held stiff and the right wrist loose, the sieve is moved fairly rapidly in small circles, with an eccentric motion pivoting on the left hand. A very little practice gives facility. It will be found in every way superior to the "to and fro" motion.

Comminution

In recommending the purchase of drugs in the whole state, so far as this was practicable, the difficulties on comminution were not overlooked. There are few drugs, however, which cannot, after a short preliminary drying, be reduced sufficiently for most purposes in one or other of the mortars recommended. The work is sometimes a little strenuous, but, as a rule, the task of powdering a few pounds of material is neither long nor hard. The loss need not be proportionately greater than by the use of a mill for larger quantities. It should be realized in powdering vegetable drugs that the portion which is most easily powdered—represented by the finer particles, which are, of course, the first to pass through the sieve—is often, from a medicinal point of view, the most valuable. The operation should, therefore, be performed lightly and with care in the first stages, in order to conserve this fraction. The young pharmacist, taking the exceedingly fine powders obtained from the wholesale houses as the perfection and *sine qua non* of comminution, must, if he has tried to match them, have decided to let those accomplish it who can. For these he will be compelled, to some extent, to be dependent upon the wholesaler. It should, however, be understood that, in many cases, these can be prepared only after most complete drying of the whole drug, to which, consequently, they are often inferior. It behoves him, therefore, to use a less finely comminuted powder of his own preparing whenever this is practicable. The very elementary principle must be stated that in powdering vegetable drugs, or indeed, any substance which is not of uniform composition or structure throughout, the portion operated upon, should be made to pass through the sieve completely, and that before any portion of it is taken for separate treatment the bulk must be thoroughly mixed.

Trituration of Powder With Liquids

In the trituration of small quantities of powders with liquids, there is not the same need for care in judging the proportion of liquid to be added in the first place as when working on a larger scale. Here, the operator may give himself a great deal of unnecessary work. The point to be remarked is that, when once the most suitable proportion has been determined, it should be noted in the formula for use on future occasions. The official Hydrarg. Oleatum furnishes a first rate example. There the quantity of liquid paraffin necessary for effective trituration has been determined with the greatest care—a point that is much appreciated when larger quantities are being handled. The practice is found most useful, also, is making ointments. Whether trituration of the powders is with the melted or unmelted base, the first addition is a matter of the utmost importance. Neglect in this particular may lead to a lumpy condition of the product that is irreparable.

Percolation

It would be superfluous to discuss the details of the process of percolation. There is one point, however, that may be mentioned with advantage—the dimensions of the percolator. In the 1914 Pharmacopoeia these are left to the discretion of the pharmacist, but in the earlier editions it was laid down that the cylindrical percolator should be "of such dimensions as to present to the menstruum a column of solid materials at least six times as high as wide." In the case of the conical form, "the lower diameter should be not less than one-half the upper diameter." In making small quantities the ratios are not unsuitable, but need not apply when these are much exceeded. Indeed the figures of the ratio may approach one another the larger the quantity of material worked upon. The point is fairly obvious, but experience has shown that it does not immediately occur to everyone. To maintain the ratio 6:1 in larger percolation would render the operation of packing difficult and unsatisfactory. If it is desired to obtain a highly concentrated percolate, the height of the column of solid materials in proportion to diameter must be increased. This is officially and reasonably effected by resorting to the process of repercolation.

Clarification

The most tedious and sometimes the most perplexing operation in the manufacture of fluid preparations is that of clarification. In time estimates it is the unknown factor, and is often most difficult of satisfactory accomplishment. Little difficulty is experienced with spirituous menstrua, but aqueous preparations, especially where either decoction or infusion has formed part of the process, may give almost an infinity of trouble. It is not to be expected that permanently clear preparations can be obtained at once, owing to deposition which takes place on standing. Error of judgment in the method adopted results in loss of time and of material, and sometimes in deterioration by undue exposure to the air. The choice of filtering media, in particular cases, is problematical; it would be impossible, for instance, to foretell the difficulty of obtaining a clear liquor in the case of decoction of cudbear, or to anticipate the easy passage through a filter-paper of the evaporated expressate of syrup of senna. As a general rule, it is advisable to strain or filter through some material which will allow the operation to be executed fairly rapidly, clarification to be completed in a closed vessel by subsidence followed by decantation, or, in odd cases, by filtration. Filter papers should, except in rare cases, be plaited.

The Making of Solutions

The method of making solutions by circulatory displacement, i.e., by suspending the solid in the upper part of the solvent, is in common practice, but the advantage of crystals over powder for this purpose is not always realized. Substances in powder dissolve less rapidly than crystals from the fact that the solvent can act only on the outside, circulation through the mass being prevented. Ammonium carbonate, for example, even in half-pound pieces, dissolves surprisingly quickly. It is a truism that one should reduce, as far as possible, the number of operations and of utensils in work of every kind. The preparation of ammonium carbonate solution in this way, using a container that prevents loss of ammonia, and in which adjustment to the final volume can be done, leaves nothing to be desired. A further point to notice is that solutions made from the powdered material are, as a rule, less bright than those made by direct solution of the crystals.

Stock-solutions can with advantage be made this way. More frequently, however, the more direct method of stirring solid and solvent together has to be resorted to. If, say, a pound of citric acid crystals are to be dissolved, the usual method is to place in a mortar and to roughly powder them. This would be energy well expended if it were done thoroughly; but if some of the larger crystals have eluded the pestle the time required for complete solution will have been lengthened instead of shortened. This will be the case especially if the finished solution approaches the point of saturation. Evenness in the size of crystals is an advantage in making solutions. The principle is fairly obvious; the finely-divided portion dissolves comparatively rapidly, the larger crystals remaining to be dissolved in a liquid already well charged. If it is desired to demonstrate this, it may be done as follows.—Take a dozen 5 grain potassium chlorate tablets (these need not be wasted) and reduce four of them to powder; now add the powder with two whole tablets to 9 fluid drachms of water contained in a 2-ounce bottle. At the same time add the other six whole tablets to a similar quantity of water under exactly similar conditions. If the bottles be occasionally shaken it will be found that the six whole tablets are the first to dissolve. The principle, is not confined to the solution of crystals.

Does It Pay?

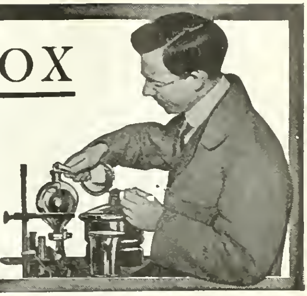
Now comes the insistent query—does it pay the retailer to manufacture? These notes are written from the laboratory of a large public institution, where the first concern is the quality and genuineness of the preparations. The question of profit is also much to the fore. It may be confidently stated that it pays the institution and pays well. My own opinion, given for what it is worth, is that it can be made to pay the retail pharmacist. Without presuming to set my neighbor's house in order, may I be allowed to remark that the pharmacist whose aim is excellence and the taking of full responsibility should not consider it a mark of grace to harbor an undue modesty. There should be a dignified and confident advertisement in such quarters as are most concerned.

THE QUESTION BOX

The "How to Do It" Department

CONDUCTED BY PHARMACEUTICAL EXPERTS

For the benefit of ERA Subscribers



What is "Gum Galipot"?

(T. F. T.)—"Gum galipot," or "galipot" is the term used to designate the crude turpentine resin formed as an exudation upon the bark of the cluster pine in Southern Europe, especially in France. As described in the books, the term would appear to be specifically applied to the hardened resin scraped off the wounds made in the trees producing turpentine, the scraping being generally effected in the winter, after the wounds have been exposed to the weather for some time. Lewkowitsch uses the term as synonymous with French rosin, for which he gives the following analytical data; Neutralization value, 138.65; saponification value, 174.76; difference, 36.11; iodine value, 121.5-123.5. As compared with Standard "W.W." (water white) American rosin, the corresponding figures of the latter are; Neutralization value, 154.1; saponification value, 183.6; difference, 29.5; iodine value, 92.4-93.5. Lewkowitsch states that as a general rule the darker a rosin is, the smaller is the difference between its saponification and neutralization values. The differences between these values for the two varieties of rosin named are given above. It may be that the name "galipot" has been applied to similar resinous exudations appearing on the trees producing turpentine in the Southern United States, but such use seems to be far from general.

Hair Dressing in Dry Form

(J.W.W.)—The idea of a hair dressing to be sold in dry form as a substitute for the various liquid applications on the market seems to us to be impracticable, as we can recall no substance which would readily suggest itself as a suitable vehicle to carry the desired medicaments and at the same time be readily soluble in water. Tragacanth, which you mention as a possible substance for this purpose, would, on admixture with water, form a mucilage, which might carry the medicating substances in suspension and be satisfactory as a fixateur or as an application for keeping "kinky" hair straight, but it is doubtful if the average individual would want to apply it to his hair. Again, it is difficult to suggest a general formula that will meet every condition of application, as medical experts themselves are not agreed as to a specific line of treatment that should be followed in a given case, much less a general variety of scalp diseases.

The proposition to dispense a dandruff remedy in ointment form in collapsible tubes rules out your proposed use of mercuric nitrate in the preparation, as the mercuric compound is decomposed when it comes in contact with any metal whatsoever. For this reason the Pharmacopoeia directs that in the manufacture of ointment of mercuric nitrate contact with metal spatulas, apparatus, containers, etc., must be avoided. Ointments containing resorcin also tend to become oxidized on exposure to the air, changing to a dark brown, although this substance is said to be effective in the treatment of some forms of seborrhea (dandruff). The best we can do is to give several formulas in ointment form which have been recommended for the treatment of dandruff, which may be dispensed in collapsible tubes:

(1)

Salol	30 grains
Tannic acid	60 grains
Balsam of peru	½ ounce
Lanolin	½ ounce
Benzoinated lard	1 ounce

Mix according to art. Apply to the scalp with massage every night.

(2)

Balsam of peru	½ dram
Betanaphthol	1 dram
Lanolin	6 drams
Benzoinated lard	2 drams.

Mix.

(3)

Salicylic acid	20 grains
Chloral hydrate	10 grains
Oil of eucalyptus	5 drops
Zinc ointment	½ ounce
Cold cream	½ ounce

Mix well.

Coconut Oil in Shampoos.

(D. C. B.)—We suppose that coconut oil may be emulsified by any of the well-known processes employed for the emulsification of other fatty vegetable oils, but as we understand the use of this oil in the manufacture of shampoo preparations, its utilization depends upon saponification, the oil being first converted into a soap by reaction with potassium carbonate or hydrate, or with both. Such a formula is the following, which may be taken as a type:

Coconut oil	16 ounces
Potassium hydrate	2 ounces
Potassium carbonate	1 ounce
Oil of bergamot	20 minims
Oil of rose geranium	10 minims
Distilled water, sufficient.	

Melt the coconut oil in a porcelain or enameled iron dish; dissolve the caustic potash in 8 fl. ounces of distilled water, and gradually add under constant stirring to the hot oil, continuing the heat and stirring until saponification is complete. Discontinue the heat, and to the warm soap add the potassium carbonate dissolved in 4 fl. ounces of water, stir or beat until the paste is uniformly smooth, and finally incorporate the volatile oils. Other substances or synthetic perfumes may be used to give the desired odor.

Another formula published in an exchange about two years ago and recommended for making a liquid shampoo, makes use of coconut oil, but also of cottonseed oil and stearic acid in the saponification reaction. In preparing the liquid soap base the manufacturer is directed to modify the formula as indicated, according to whether the preparation is to be sold in districts where the water is hard or soft. The formula is as follows:

For 2,500 Cc.	soft water	med. hard water	hard water
Coconut oil	100 Gm.	200 Gm.	300 Gm.
Cottonseed oil	400 Gm.	300 Gm.	200 Gm.
Commercial stearic acid	100 Gm.	100 Gm.	100 Gm.
Caustic potash, U.S.P. 85%	120 Gm.	126 Gm.	132 Gm.
Caustic potash, U.S.P. 90%	12 Gm.	12 Gm.	12 Gm.
Alcohol	125 Cc.	125 Cc.	125 Gm.
Potassium carbonate	20 Gm.	30 Gm.	40 Gm.
Soft or dist. water	q. s.	q. s.	q. s.
Talcum	15 Gm.	15 Gm.	15 Gm.

Melt the oils and stearic acid together and add the caustic potash and soda dissolved in 100 Cc. soft water. Boil carefully, to avoid burning, adding more water as necessary, until no alkali is perceptible upon testing. Then add the potassium carbonate dissolved in 250 Cc. soft water and boil for two hours more. Allow to cool, add the alcohol and perfume if desired, adding sufficient soft water to make 2,500 Cc. Let stand three days, or longer if possible, add talc and filter through double filter paper until clear. The following is an agreeable perfume. Syringa, artificial, 5 Cc.; oil of rose, artificial, 0.5 Cc.; oil of jasmine, artificial, 0.5 Cc.; terpineol, 7.5 Cc.; oil of rose geranium, 0.5 Cc.; oil of cloves, 0.5 Cc.; artificial musk, 0.5 Gm.; alcohol, q.s., to make 20 Cc. Place in a bottle and warm gently, shaking until the musk dissolves. Green or yellow aniline soap colors may be employed to tint the shampoo preparations.

It is stated that some manufacturers prefer to make shampoo specialties direct from a good grade of coconut oil soap. It is wellknown that soap formed by the reaction between coconut oil and alkali is much more soluble than soap made from animal fats, and it therefore lathers very freely even with cold water, but the lather is thin and of short duration. To overcome this difficulty practical manufacturers mix with the coconut oil previous to saponification a quantity of cottonseed oil, castor oil, or other fatty vegetable oil. A few experiments along this line may prove helpful.

Bedbug Exterminator

(B. D. Co.)—We have printed many formulas for preparations of different types recommended to remove or exterminate the troublesome bedbug, as also the reports of analyses of commercial compounds advertised for the purpose, and have yet to find a combination that has proved satisfactory to everybody. The consensus of opinion, however, seems to indicate that gasoline is the most effective remedy, but as its use is attended with great danger on account of its inflammability, its employment is practically prohibitive. A non-inflammable insecticide of the "liquid" type, recommended by some is this one:

Carbon tetrachloride	1 pint
Denatured alcohol	3 pints

Mix. Use with a sprayer by which the fluid may be injected into the haunts of the vermin. It is claimed to be very effectual for getting rid of all bugs which infest rooms, beds, closets, etc., and will not injure the color of fabrics, curtains, and the like.

Other mixtures in liquid form are the following:

(1)

Corrosive sublimate	1 ounce
Wood alcohol	24 fl. ounces
Oil of turpentine	8 fl. ounces
Oil of cedar	1 fl ounce

Dissolve the corrosive sublimate in the alcohol and add the oils. Oil of turpentine used by itself is also a good insecticide.

(2)

Corrosive sublimate	1 part
Ammonium chloride	2 parts

Dissolve in

Decoction of quassia	100 parts

This formula is taken from Hager's Manual.

Mixtures containing corrosive sublimate are poisonous and care should be taken to have them properly labeled, and any unused portion should be placed where it will not be mistaken for a harmless remedy.

Soap and Sulphuric Acid

(T. R. G.)—"How would you compound the following?

Cocoanut oil soap	1 ounce
Sulphuric acid	1½ ounces
Glycerin	1 ounce
Aqua ammonia, 18 per cent.	1 ounce

"Please comment on the same?"

A more incompatible mixture can hardly be suggested, and we do not know the purpose for which it is to be employed. However, sulphuric acid is incompatible with every other substance named in the formula, the exact reaction in each case depending somewhat on the order of admixture. Thus, sulphuric acid will decompose the soap and form a sulphate with the alkaline base, and will also probably carbonize most of the liberated oleic acid. Sulphuric acid decomposes glycerin with the formation of acrolein, and will combine with the ammonia to form ammonium sulphate. We should not try to compound the mixture.

Perspiration Lotions and Powders

(F.J., Manila)—The selection of a formula for the correction of excessive perspiration is largely a matter of choice, the principle underlying the application of lotions and powders being practically the same in all of them. Here are some formulas:

Perspiration Lotion

Glycerin of alum	4 fl. ounces
Rose water, enough to make	1 pint
Solution of cochineal, q.s. to color.	

This solution depends for its activity on the astringency of the alum. Directions: Put 30 drops in a wine glass of water and use for dabbing the armpits, between the toes, etc. After the application has been absorbed, the parts should be well dusted with an antiseptic powder (e.g., boric acid, 1 part, purified talc, 2 parts).

A very dilute solution of formaldehyde is similarly applied, while another solution frequently recommended consists of hydrastine hydrochloride, 5 grains, dissolved in cologne, 4 ounces; apply frequently to the surface.

Perspiration Powder

Carbolic acid	1 part
Dried alum	4 parts
Starch	200 parts
French chalk	4 parts
Oil of eucalyptus	2 parts

Mix. Recommended as a satisfactory foot powder.

A soluble antiseptic powder may be prepared along the line of the "pulvis antisepticus" of the National

Formulary, and use as a dusting powder or in 2 per cent. solution. According to the "Physicians' Manual of the U. S. P. and N. F.," this powder is similar in composition to various antiseptic powders of more or less secret composition sold under trade names.

Red Solution for Show Globes

(C. D. R.)—Most all of the colored liquids used in show globes tend to fade on exposure to light, especially if the tint is produced by means of an organic color or an aniline dye. As permanent a solution as we know of may be made as follows:

Iodine	3 drams
Potassium iodide	3 drams
Hydrochloric acid	10 ounces
Water	2 gallons

Dissolve the iodine and potassium iodide in 8 ounces of water, and dilute with the remainder of the water to which the acid has been previously added.

Another formula which is claimed to make quite a permanent solution is this one:

Solution of ferric chloride	60 parts
Concentrated ammonium acetate solution	120 parts
Acetic acid, 30%	30 parts
Distilled water to make	9000 parts

All parts by weight.

Of course, any color can be deepened by omitting water, that is, stopping the addition of water when the desired shade is reached. On the contrary, the colors may be lightened by adding more water. Distilled water should be used, and to clarify it is best to let the solutions stand for a time and then decant the clear supernatant liquid. If filtration is desired, plug the neck of a funnel with glass wool, and strain through that.

Here are two formulas which are said to produce satisfactory colors, but which are not claimed to be very permanent:

(1)

Fuchsine	20 grains
Acetic acid	2 fl. ounces
Distilled water	1 gallon

(2)

Solution of iron chloride	20 drops
Potassium sulphocyanide	20 drops
Water	1 gallon

Mix, dissolve and filter.

Other colors, almost any desired shade, can be made from the coal tar colors. These come in endless variety and most of them dissolve readily in water, yielding a clear solution, particularly when dilute. The package dyes sold in most drug stores are quite suitable for this purpose. The cost is scarcely to be considered, and a change may be made as often as the druggist wishes.

Sodium Aluminate

(M. H.)—Sodium aluminate is not sodic alum, as you seem to think, but a definite chemical compound, expressed by the formula $Na_2Al_2O_4$. It is prepared on the large scale by fusing cryolite with lime, or bauxite with soda or sodium sulphate and carbon, as well as with common salt in a current of steam. When the melted mass is lixiviated with water and the solution evaporated to dryness, sodium aluminate is obtained. This substance serves as a mordant in dyeing and calico printing, for the preparation of lakes, sizing of paper, hardening of stone, and in the saponification of fat in candle factories, large quantities of sodium aluminate it is said, being manufactured under the name of "natrona refined saponifier" and employed in soap boiling. Sodium aluminate is also used in making an opaque, milky-looking glass, or semi-porcelain.

Sodium aluminate is equally soluble in cold and hot water. Exposed to air it absorbs moisture and carbonic acid, and consequently on being dissolved in water the salt so changed yields a turbid solution, owing to alumina in suspension. According to Wagner's "Chemical Technology," sodium aluminate was first brought under the notice of dyers by Macquer and Hausmann in 1819, but owing to the preparation being too expensive it did not come into industrial application until many years later. It is usually in the form of a white crystalline mass, and is known in the dye industry as alkaline pink salt or alkaline pink mordant being used for dyeing Turkey red on cotton.

Hop Beer

(N. S., Sydney)—The title "hop beer" without other qualification is somewhat elastic, and is applied to home-brewed beverages, at least in this country, made not only from hops, but often with combinations of various other materials, as roots, herbs, etc. Here are several formulas; you can take your choice:

(1)

Hops	6 ounces
Ginger, bruised	1 ounce
Molasses	½ gallon
Water	sufficient

Pour 1 gallon water on the mixed hops and ginger, heat to boiling and boil for half an hour, strain and add water through the strainer to make the liquid measure 1 gallon. To the latter add the molasses, about one-half pound of bread which has previously been well browned, dried and reduced to a coarse powder, and a pint of brewer's yeast or a cake of compressed yeast. Put the whole in a warm place until fermentation ceases, then draw off the clear liquid, put into bottles or a jug or a keg, and keep in a cool place.

(2)

Burdock root, bruised, 8 ounces; or essence of sassafras, 2 fl. drams; hops, 1½ ounces; corn meal, roasted brown, 4 ounces; molasses, water, of each sufficient. Boil the hops, corn meal and burdock (if the latter is used), with 1½ gallons of water for half an hour, strain and add enough water through the strainer to make 1½ gallons; add the molasses (and essence), using enough of the molasses to make the mixture palatable but not too sweet, add the yeast, and ferment as directed in the preceding formula.

(3)

Another formula from an English source calls for an "essence of hops," which is made as follows: Quassia, 20 ounces; gentian root, 1 pound; best hops, 4 pounds; bitter orange peel, 20 ounces, oil of hops, 6 drams; rectified spirit (64 o. p.), 20 pints; distilled water, 16 pints. Macerate seven days, press, and filter. This may be used to flavor syrup or to make a "hop beer" according to the following formula:

Essence of hops	¾ ounce
Strong tincture of ginger	2 drams
Fresh yeast	5 ounces
Cane sugar	3 pounds
Boiling water	2 gallons

Dissolve the sugar in the water, and when cooled down, add the essence, tincture, and yeast. Set aside in a warm place for a few days to ferment, then strain and bottle.

One hundred and thirty-nine Minnesota pharmacists have volunteered for special war duty as recruiting agents for the new American Merchant Marine, according to a statement issued at the headquarters of the United States Shipping Board recruiting service.

New Books for Pharmacists

YEAR BOOK OF THE AMERICAN PHARMACEUTICAL ASSOCIATION, 1916, 8 vo., 559 pages, cloth, $4. Chicago. Published by the association.

This is Volume 5 of the association's annuals, containing the fifty-ninth annual report of the progress of pharmacy, and the constitution, by-laws, and roll of members, corresponding to Volume 64 of the former proceedings of the organization. The abstracts were prepared by Prof. Henry V. Arny and a staff of collaborators, the preparation of the copy, the reporter stating, being made difficult by the absence of practically all journals from Germany, Austria and even Switzerland, a condition which was largely overcome by making use of abstracts from English, French and Dutch journals, and notably from "Chemical Abstracts," the editorial staff of which was able to secure sets of the 1916 journals from the Teuton nations. In scope, however, the present Year Book is about as comprehensive as ever and we are sure it will prove a valuable reference work for any retail druggist or pharmaceutical chemist. The list of new remedies is very complete, and the information concerning new preparations, formulas for pharmaceutical specialties, cosmetics, and the advances in science will surely prove helpful to workers in pharmacy.

PROCEEDINGS OF AMERICAN CONFERENCE OF PHARMACEUTICAL FACULTIES, 1917. 8 vo., 248 pages.

This volume contains a full report of the eighteenth annual meeting of the American Conference of Pharmaceutical Faculties held at Indianapolis last year; the roster of membership which now numbers forty-four, two institutions—the University of the Philippines and the South Carolina, having been added during the year, while two schools, the Medico-Chirurgical College and Northwestern College, having merged with other schools during the year, were dropped. The discussions covered a wide range of subjects, embracing questions relating to entrance qualifications, college faculties, student activity control, fellowships, pharmaceutical research, uniform college bulletins, reports of pharmacy courses in high schools, President Wulling's address and kindred topics.

An account of the lives and services of the late Julius O. Schlotterbeck, William C. Alpers and C. Lewis Diehl, prepared by Dr. Edward Kremers of the University of Wisconsin, accompanied by full page portraits of each of the deceased educators, is a feature of the volume.

THE FUR TRADE OF AMERICA and some of the men who made it, together with furs and fur bearers of other continents and countries and islands of the sea. By A. L. Belden, 6½ x 10 inches, 591 pages, cloth. $6. New York, The Peltries Publishing Company, Inc.

The point of contact between the subject covered in this volume and the average pharmacist is really larger than it would appear at first sight. Like other well educated men, the pharmacist will find collated here many interesting facts about a business which will appeal to his imagination and the exploits of mighty hunters, the winning of a Continent and the settlement of the Great West. He will learn that the fur trade is dependent upon an exceptionally large number of industries for essential supplies such as lumber, butter, oil, salt, coal, chalk, acid, and a dozen or more industries producing chemicals, fabrics, rubber cement, artificial eyes, dyestuffs, fur dressing, dyeing machinery, and—cold storage.

The animal kingdom has contributed a number of products to the materia medica, the use of some of them in this age being far from general and interesting only as throwing a curious sidelight on the credulity of the human race. Thus, in some parts of England, we are told, it is believed that the tongue of a fox, cut from the living animal, renders the person carrying it immune to all diseases. In former days the right forefoot of the hare was carried in the pocket as a preventive of rheumatism, and doubtless was as effective as a horse chestnut persistently toted for the purpose. The negro voodoo doctor, even in enlightened America, still carries a rabbit foot somewhere about his person and considers it an irresistible charm, working good to himself and evil to his enemies. Bear galls, castoreum, musk, the scrapings of deer horns and some other substances of animal origin are utilized to some extent, but most of them have been superseded by more or less potent remedies procurable at a lower cost.

Of particular interest to pharmacists is the information that nearly $150,000 worth of scent from the pouch of the civet cat, Asiatic and African, which is used in sundry perfumes, was exported to the United States in 1916. Bear's grease, which at one time was regarded as a hair oil of unexcelled value and a sure cure for sundry imaginary diseases of the human scalp, ceased to be intensely popular some time in the latter part of the nineteenth century for good and sufficient reasons—the scarcity of fat bears, and the fact revealed by analysis that nearly all bear's oil sold at a fairly high price had other than a bear origin. Skunk oil, tried and purified, it would appear, is still used to some extent as a lubricant of human locomotive powers, while bristles and hair from animals are important materials in the manufacture of brushes.

USE YOUR GOVERNMENT: What Your Government Does for You. Alissa Franc. 12 mo., 374 pages, cloth, $2. New York. E. P. Dutton & Company.

This title might be somewhat misleading until it is explained that "you" means man of business, farmer, exporter, home maker, school boy or school girl, and that the author makes the attempt to show how many and varied are the ways in which the Government co-operates with the people of the United States. To make use of the vast fund of information that has accumulated as the result of numerous activities on the part of the Government is the right of every person within its protection, and in this direction the book blazes a new trail. The agricultural extension work projected by the Government is actually known to but few, and many of its other activities for the public good are probably less known, but in this volume an outline of these activities is presented in a concise and attractive form so that foreigners and Americans alike may now learn what the Government is doing for the people.

THIRTY-FIFTH ANNUAL REPORT OF THE BOARD OF PAR COMMISSIONERS, City of Minneapolis. 1917.

This is a most interesting volume showing the activities of the Minneapolis Board of Park Commissioner during the past year, and to the outsider, it visualize most emphatically the scenic beauties and attraction of a wonderful park system. Among the tracts th commissioners acquired for park purposes during th past year were two belonging to the United State Government at Lock and Dam No. 2 in the Mississip River, this purchase completing the City's title to bo banks of the river.

The Progress of Pharmacy

Telor Kodok—

"Telor kodok" is the name given by the Javanese to the seeds of the plants belonging to the genus *Hygrophila* of the *Acanthaceae.* These seeds have the peculiar property of turning into a gelatinous, shiny mass on coming in contact with water and the natives use this mass for the preparation of cold compresses and poultices to be used in case of headaches or fever. The curious nature of the seed has given rise to the name "Telor kodok," i. e., "frogs eggs."

Professor A. Leudner publishes in the *"Schweiz, Apoth. Zeitung,"* 1918, No. 127, an interesting study, accompanied by five illustrations, on these seeds, apparently in this case a variety of *Hygrophila Salicifolia* Nees, from the Dutch East Indies. These seeds are quite different from the Chinese variety, known as "sing-li-tzie," or "ting-li-tzu," and hitherto thought to be produced by a *Hygrophila polysperma* Roxb. According to Professor Leudner, the seeds do come from an *Acanthace* but not from *Hygrophila polysperma.*

Root disease of Divi-Divi and Wabi—

The *Indische Mercuree* publishes a short resume of the work of Dr. P. J. Van Breemen on the above problem as it is found in Curacao. The disease in question is a mold disease, the plants dying very quickly without exhibiting any outward peculiarity. The disease frequently spreads in the direction of the wind, and according to Dr. Van Breemen, is caused by a fungus of the Polyporus variety that appears at the foot of the trunks. These trunks, when closely examined, are found to have rotten parts, which are subject to attack by the fungus, in which cases the roots are also infected. Microscopic examination brought to light a dull yellow mycelium which was present in the wood cells. In several cases chlamydospores had formed in the tissues, and the writer suggests that the fungus lives on these spores.

The wabi is also attacked by the same fungus, but whereas the fruits of the Polyporus are seldom found on divi-divi, they are usually seen on wabi and then only on heavily pruned bushes. Infection is thought to commence at the pruning wounds, the mold threads then communicating the disease to the roots. The *Indische Mercuree* is of the opinion that in the case of divi-divi, Polyporus may be a secondary wound parasite. The methods of infection in the case of divi-divi and of wabi are entirely different and may be caused by two different parasites.

Economic Condition of Kediri—

It is reported that conditions in the Kediri province of Java have never been so dark since the outbreak of the war. On account of the fall in the price of copra, cocoanuts have reached a level that has not been known since the low prices ruling during 1909. The consequence is that large quantities of native-prepared oil are appearing in the bazaars. Katjang, too, is affected, so that in spite of the high price the boengkil commands, the oil has fallen considerably. In the Southwestern portion of this province, the quality of copra is far below the average, so that under present circumstances it is useless.

Discovery of Herapathite—

Referring to a note published in the *Chemist and Druggist* fifty years ago, Dr. C. K. C. Herapath, Bristol, England, writes to that journal that the discovery of herapathite was made by his father Dr. W. Bird Herapath, and not by Prof. W. Herapath, as recently stated. According to the editor of the *C. & D.* there was considerable confusion between the two Herapaths, father and son, when they were alive, as they were both distinguished analysts. Both died in the same year. Herapathite is a periodide of quinine, the formation of which is used by students as a test for quinine. Iodine dissolved in alcohol, is added to a solution of quinine sulphate, when crystals separate which are golden-green by reflected light and a pale olive green by transmitted light. Dr. W. Bird Herapath announced the discovery in 1852, and stated that the salt was originally formed in a bottle of quinine sulphate solution kept ready for dispensing through the accidental introduction of iodine. On account of the curious optical properties of the crystals, Dr. Herapath applied to them the name "artificial tourmalines," the designation "herapathite" being given to them by Professor Haidinger as a compliment to the discoverer.

Ipecacuanha and Emetine in Treatment of Dysentery—

Huerre (*J. pharm. chim.*) through *Chemical Abstracts* favors the use of the official "total" ipecac preparations (extract and syrups), i. e., those not deprived of alkaloids, as against emetine-free ipecac, in cases of dysentery. The "Brazilian" treatment of ipecac root, i. e., successive aqueous maceration, infusion and decoction, extracts, it is true, a total of 20 per cent. while the Codex 1908, using 70 per cent. alcohol, yields only 17 per cent.; but this extract contains all of the alkaloid of the root, while the "Brazilian" treatment extracts only 60 to 65 per cent. The ratio between emetine and total alkaloid extracted is the same in both cases. Emetine may be considered as a specific in amebic dysentery, but in the form of injection does not reach the parasites when they are encysted; in this case, treatment by ipecac injection should be added. Herail, in discussion, concludes that emetine and total ipecac are appropriate in treatment of amebic, but are harmful in bacillary dysentery, in which case, in conjunction with serum therapy, ipecac deprived of all alkaloids has proved beneficial.

Paraffin Treatment of Burns—

The use of a French proprietary called "ambrine" was announced comparatively early in the war. Ambrine is a preparation of hard paraffin, containing, some say, resin and oil of amber. When melted and applied to burns or wounds, it forms an air-tight coating under which the lesion rapidly and completely heals. Its success was undoubted, and it was not long before investigations were afoot with a view to ascertain the rationale of its action, and, if possible, to discover an effective and inexpensive substitute for use on a large scale. Ordinary paraffin was not sufficiently plastic when applied to the skin, and attempts to mix resin with it failed, owing to separation of the resin when the mixture was heated. It was found, however, that when hard paraffin was heated to 130° C., by means of superheated steam, some molecular change took place, the melting point was reduced several degrees, and the substance took on properties similar to ambrine. This paraffin, with the addition of certain antiseptics, is known officially as "No. 7 Paraffin," and its formula is; Resorcin, 1 (or beta-naphthol, 0.25); oil of eucalyptus, 2; olive oil, 5; hard paraffin, 67; soft paraffin, 25. The method of application is as follows: The burn is washed with sterile water; a layer of melted paraffin is then painted on, and covered with a thin layer of cotton wool; a second layer of melted paraffin is applied over that, and the whole covered with wool and a bandage. The dressing is changed daily at first, later every second day (*Pharm. Journ.*).

Rubber Spatulas Dangerous—

The generation of static electricity induced by rubbing vulcanized rubber articles and of the special attraction of paper for electrified objects are familiar phenomena, but Robert W. Terry did not recall these in connection with the use of rubber spatulas (*Midland Druggist*) until he endeavored to weigh 0.500 gram of rennin on a prescription balance, the pans of which contained powder papers. In making the weighing he noted that it took more than ordinary manipulation to make the load even. When the spatula came near the pan to remove some of the rennin, the pan swung upward, owing to the electrification of the spatula which had been wiped dry about five minutes before it was used. It was noted that the power of attraction for the powder paper was sufficient to raise the pan containing a decigramme weight (about 1½ grains). The electric charge was not totally dissipated even after twenty-four hours, and circumstances are suggested where a grain and a half overweight of a toxic substance would prove fatal. For this reason he argues, rubber spatulas should never be used in weighing.

Bichloride Poisoning: Its Antidote—

After considerable testing with the mercury salts, Wm. Vogel (*Midland Druggist*) finds that sodium phosphite ($NaHPO_3$) is a proper and safe antidote to bichloride poisoning, because it is harmless when taken inwardly and in solution will throw down the mercuric chloride and form the mild chloride of mercury (calomel). The sodium phosphite should be given in solution; two ounces of the salt to make a four-ounce solution. The dose of one to two teaspoonfuls every hour or two, should continue for at least two days, and then four times a day for one to two weeks. Castor oil should be given once a day to evacuate the bowels, thereby carrying off the calomel that may be formed in the stomach and intestines. The author reports two cases of bichloride poisoning in which sodium phosphite was successfully employed as an antidote, recovery in each case being attended by no bad after-effects. Few pharmacists carry sodium phosphite in stock, but it is cheap and every one should have it, and also see that hospitals and physicians have it on hand.

Newfoundland Cod Liver Oil—

Large quantities of cod liver oil are produced in Newfoundland as a by-product of the fishing industry, but the quality of the refined oil was formerly much inferior to that prepared in Norway, and consequently the Newfoundland oil was not greatly esteemed for medicinal purposes. According to the March issue of the *Chamber of Commerce Journal*, London, considerable attention has been devoted recently to the improvement of the quality of the cod liver oil produced in the island. The same authority states that in 1910, the Government procured the services of a Norwegian expert, who had been engaged in the manufacture of cod liver oil in the Lofoden Islands, to instruct the Newfoundland refiners in the methods of preparing the finest oil. A system of Government inspection of oil refineries was also introduced, and in May, 1916, an "Act respecting the refining of cod liver oil" was passed by which it was made compulsory for every refiner of the oil in Newfoundland to obtain a license and to observe certain rules and regulations in the preparation of the oil. Under the provisions of this act no refined cod liver oil is now allowed to be exported from Newfoundland without having been inspected and branded by a Government officer. The result of these measures has been to bring about a great improvement in the quality of Newfoundland cod liver oil, and it is claimed that the refined oil is now equal to the best Norwegian oil.

The production of refined cod liver oil in Newfoundland has increased considerably in the last few years, but the bulk of the oil obtained is still of common quality. In 1913-14, 1,054,208 gallons of common cod oil were exported from Newfoundland, as contrasted with 26,218 gallons of refined; in 1914-15, 1,239,040 gallons of common against 47,170 gallons of refined; and in 1915-16, 1,313,280 gallons of common against 142,637 gallons of refined.

Methods of Gas Warfare—

In a lecture delivered before the Washington Academy of Sciences early in the present year, S. J. M. Aulde, of the British Military Mission, gave an outline of the various gases the Germans have been using on the Western Front and the means that have been taken to combat their effects. He also exhibited various types of gas shells, helmets, masks, and respirators. The following compounds have been used by the Germans in gas clouds or in shells:

1. Allyl-iso-thiocyanate (Allyl mustard oil), C_3H_5NCS (shell).
2. Benzyl bromide, $C_6H_5CH_2Br$ (shell).
3. Bromo-acetone, $CH_2Br\text{-}CO.\ CH_3$ (hand grenades).
4. Bromated methyl-ethyl-ketone (bromo-ketone), $CH_2BrCOC_2H_5$ or $CH_3.\ CHBr\text{-}CH_3$ (shell). Dibromo-ketone, $CH_3COCHBr\text{-}CH_2Br$ (shell).
5. Bromine (Br_2), (hand grenades).
6. Chloro-acetone, $CH_2Cl\text{-}COCH_3$ (hand grenades).
7. Chlorine, Cl_2 (cloud).
8. Chloromethyl-chloroformate (Palite), $ClCOOCH_2Cl$ (shell).
9. Nitro-trichloro-methane(chloropicrin or nitrochloroform),CCl_3NO_2 (shell).
10. Chlorosulphonic acid, $SO_3.H.Cl$(hand grenades and "smoke pots").
11. Dichloro-diethylsulphide (mustard gas), $(CH_2ClCH_2)_2S$ (shell).
12. Dimethyl sulphate, $(CH_3)_2SO_4$(hand grenades).
13. Diphenyl-chloro-arsine,$(C_6H_5)_2AsCl$ (shell).
14. Dichloromethyl ether, $(CH_2Cl)_3O$ (shell).
15. Methyl-chlorosulphonate, CH_6ClSO_3 (hand grenades).
16. Phenyl-carbylamine chloride, $C_6H_5NCCl_2$(shell).
17. Phosgene (carbonyl chloride), $COCl_2$(cloud and shell).
18. Sulphur trioxide, SO_3(hand grenades and shell).
19. Trichloromethyl-chloroformate (diphosgene, superpalite), $ClCOOCCl_3$ (shell).
20. Xylol bromide (tolyl bromide), $CH_3C_6H_4CH_2Br$ (shell).

X-Ray Proof Ointment—

A layer a thirtieth of an inch thick of the paste prepared according to the following formula is quite impervious to the X-ray and is in much demand by roentgenologists:

Beeswax	125 grams
Petrolatum	125 grams
Powdered rosin	31 grams
Anhydrous woolfat	62 grams
Finely powdered litharge	745 grams

The beeswax is melted on a waterbath and the petrolatum and woolfat added. When this mixture has completely melted the powdered rosin is then added, and the heating continued till fusion is complete. Then the finely powdered litharge is incorporated in small portions at a time, and the mixture stirred till cold. This ointment must be at least two weeks old before being used. When freshly prepared it has the drawback of adhering tenaciously to the skin (*Am. Dr.*).

DRUG TRADE ROLL OF HONOR

To honor the men of Pharmacy serving in the war against Autocracy the ERA wants to publish a complete roster. Send full particulars to 3 Park Place, New York.

JAMES HOWARTH LUKER, son of Owen F. Luker, druggist, Utica, N. Y., U. S. Army, Field Artillery.

CHARLES A. RICCO, pharmacist, Bridgeport, Conn., Hospital apprentice, 1st class, U S. Navy, Brooklyn Navy Yard.

THOMAS J. CHAMPION, JR., Gilreath-Champion Drug Co., Cartersville, Ga., U. S. Navy.

B. J. HARRISON, Americus, Ga., Hospital Service, U. S. Army.

ALBERT W. BACH, Hendershot's drug store, Newton, N. J., Sanitary Detachment, 310th Infantry, somewhere in France.

ELLIOTT A. MAYO, son of Caswell A. Mayo, editor of the "American Druggist," New York, U. S. Ambulance Service.

FRANK N. LEHMAN, N. Y. C. P., '17, Base Hospital, Camp Belboir, Va.

ROY A. LEHMAN, Expeditionary Force, Pier 45, New York.

WALTER J. KOSTKA, son of Henry F. Kostka, druggist, Chicago, sergeant, Camp Logan, Texas.

RAYMOND MAHAFFY, only son of J. A. Mahaffy, druggist, Chicago, Ill., Hospital Steward, apprentice 1st class, U. S. N., Great Lakes Naval Station.

CARL W. PLUMMER, Chicago, Base Hospital, Camp Sheridan, Montgomery, Ala.

FRANK S. SCHANER, Ph. G., '08, Schaner Drug Co., Mt. Clemens, Mich., corporal Machine Gun Co., 338th Infantry, Camp Custer, Battle Creek, Mich.

THURSTON V. V. ELY, drug department of H. R. Lathrop & Co., New York, 4th Officers' Training Camp, Camp Meade, Md.

HAROLD ALCOTT SLOAN, son of F. H. Sloan, president of Dodge & Olcott Co., New York, 2nd lieutenant, Aviation Corps, U. S. A.

FREDERICK H. KENNEDY, son of E. J. Kennedy, editor of THE PHARMACEUTICAL ERA, 2nd lieutenant, Motor Transport Inspection Corps, N. A. Quartermaster General's Office, Washington, D. C.

CHAS. B. DURGIN, with W. I. Durgin, druggist, Wilton, N. H.; corporal, chemist Ordnance Dept., Washington, D. C.

JOHN A. FITZGERALD, with W. I. Durgin, druggist, Wilton, N. H.; private, Medical Department, U. S. A.

FRANCIS KUSNICK ROBERTS, '16 (Cincinnati C. P.), with Kusnick's Pharmacy, Cincinnati, Battery E, 136th Field Artillery, Camp Sheridan, Montgomery, Ala.

Dean C. B. Jordan of Purdue University School of Pharmacy, Lafayette, Ind., reports that 65 graduates and students of the school are now in the service of the United States. The following notes relating to recent activities of these men are submitted:

L. ATKINSON '15, and CHAS. GREEN '15 both received commissions from the Third Officers Training School.

H. B. ROBB ex '18, Gas Defense Service, Yale University.

F. J. FRIDY '17 and W. N. BURNS '14 members of the Purdue Training Detachment of the National Army.

R. B. WILKINS '16, with the Goodyear Rubber Co. of Akron, Ohio, Gas Defense Service, Canton, Mass.

Illinois University School of Pharmacy sends the following names to be added to those already in the service:

JOSEPH ANTONELLO, '17, detailed to chemical laboratory, Naval Station, Great Lakes.

THOMAS J. FLYNN, Navy, New London, Conn.

EDGAR FLYNN, '11, 5th Unit Medical Supply, Newport News.

DR. JACOB A. GOODMAN, '07, lieutenant, Medical Department, U. S. Army.

DR. CHARLES PATT ECK, '11, lieutenant, Medical Corps, France.

HOMER L. WHERLEY, '16, Convalescent Camp No. 2, France.

EDWIN J. UNDERRINER, '16, Hospital Corps, U. S. Navy.

DAVID LOFGREN, '16, private, Co. 17, 161st Depot Brigade, Camp Grant, Ill.

The Philadelphia College of Pharmacy supplies the following additional list of names on its Honor Roll:

DAVID F. AKE, 5th Battery, Leon Springs Training Camp, Camp Stanley, Texas.

JOHN H. ALLEN, '06, Sanitary Detachment, 59th Pioneer Inf. Reg. of Del., Camp Dix, N. J.

GUSTAVE G. ANDERSON, '08, Hospital Corps, Wissahickon Barracks, Cape May, N. J.

JAMES P. ANDERSON, '17, Co. C., 19th Reg. Engineers, A.E.F.

WM. E. ANDREW, '09, lieutenant, M.O.R.C., Camp Greenleaf, Ft. Oglethorpe, Ga.

GUY R. ARNOLD, '13, 103rd Ammunition Train, Co. I, Camp Hancock, Ga.

FRANK D. ASKEW, Co. M, 104th Motor Supply Train, Camp McClellan, Ala.

HOWARD ASHTON, '11, U. S. Naval Reserves, Recruiting Station, Wilkes-Barre, Pa.

HAROLD I. BALCH, Aerial Signal Service.

HOWARD L. BILL, Pharm, Mate, 3rd class, Naval Hospital, League Island, Philadelphia, Pa.

WALTER L. BISCHOFF, Base Hospital, U.S.A., British Ex. Forces, France.

WALTER F. BLOES, U. S. Naval Hospital, Narragansett Bay, Newport, R. I.

STEPHEN D. BOLTON, '10, 309th H. F. A., Medical Dept., Camp Dix, N. J.

WM. M. BOYD, '17, Medical Reserve Corps, 315th Infantry, R 11, Camp Meade.

FREDERIC A. BRENNER, '01, University Base Hospital, No. 20, Philadelphia.

BERICE B. BROWN, '15, U. S. Naval Hospital School, San Francisco, Cal.

CHARLES H. BROWN, '13, 13th Co., 154th Depot Brigade, Camp Meade, Md.

DAVID B. B. BUCHANAN, '16, Medical Corps, Mobile Hospital Unit, A. E. F. France.

WM. J. CONLEN, '16.

H. H. CORNELL, sergeant Phila. U. S. Base Hospital, No. 16, British Ex. Forces, France.

MAURICE B. DABNEY, '17, D 11, 368th Infantry, Medical Corps, Camp Meade.

JOHN F. DAY, Base Hospital No. 24, A. E. F.

DR. ROY DECK, '10.

GEORGE C. DERICK, 111th Hospital Corps, Camp Hancock, Augusta, Ga.

CHAS. S. DICKINSON, '96, captain, 304th Ammunition train, Camp Meade, Md.

HENRY DINGLER, '17, 306th Ambulance Co., Camp Upton, L. I.

ROBERT L. DRY, dispensary, Ft. de Lesseps, Canal Zone, Panama.

E. BLAIR DUNKELBERGER, '13, Base Hospital, Cape May, N. J.

C. J. DURAND, '16, N.C.O. School, Camp Greenleaf, Fort Oglethorpe, Ga.

WM. J. DURKIN, '12, Hospital Corps, Wissahickon Barracks, Cape May, N. J.

LOUIS H. EATON, '15, Medical Corps, 149th Machine Gun Battalion, 42nd Division, A.E.F., France.

WILBUR J. ELLIS, '17, sergeant, Base Hospital, Camp Gordon, Ga.

HAROLD J. ERNST, '17, Embarkation Hospital, Camp Stewart, Newport News, Va.

CHAS. B. EVERLOCKNER, '15, Med. Dept. 112th Reg. H.F.A., Camp McClellan, Ala.

NOEL B. FELL.

JOHN A. FOLEY.

W. CLIFFORD FORBES, '17, 167th Infantry, M.C., A. E. F.

CLAUDE E. GAULT, '11, 1st Co. Ordnance Recruit Dept. Camp Sheridan, Ala.

WALTER W. GEHMAN, '17, 7th Co. 2 Tr. Bn., 154th Depot Brigade, Camp Meade, Md.

PAUL E. GIBNEY, '10

ADOLPH A. GOLDBAUM, '16.

RAYMOND C. HACKER, '17, Field Ambulance Co., No. 36, Camp Greenleaf, Ga

HOWARD J. HAINES, Base Hospital, Camp Gordon, Ga.

ALLEN K. HARTMAN, died in service.

ASHER M. HAWK, '15.

KENNETH B. HAY, died in service.

PAUL W. HECKMAN, '17, Medical Dept., Camp Alfred Vail, Little Silver, N. J.

ROY S. HEISER, Post Hospital, Camp Gaillard, Canal Zone.

FRANK HELM, Base Hospital, Camp Upton, L. I.

JOHN C. HELNORE, '17.

CLAYTON B. HILL, '16.

LEROY HILLEGASS, '12, Camp Meade, Md.

RALPH C. HOLMES, '11, Evacuation Ambulance Co. No. 4, Camp Greenleaf Annex, Fort Oglethorpe, Ga.

WILLIAM J. HURLEY, '14, phar. mate, 3rd class, U. S. Naval Reserves.

GEORGE B. HUTCHINSON, '13, Med. Corps, Camp Zachary Taylor, Louisville, Ky.

SAMUEL M. IRWIN, '13, Field Hospital Division, Camp Meade, Md.

SINCLAIR S. JACOBS, '09, Emory Base Hospital Unit, Camp Gordon, Ga.

DR HENRY D. JUMP, '09.

ROBERT R. KEELY, '16, Base Hospital, Camp Meade, Md.

WARRINGTON E. KELLAM.

FRANK S. KORNCAVITZ, '16, Base Hospital, Camp Gordon, Ga.

GORDON LEECH, '12, Phil. Gen. Hospital No. 16, British Ex. Forces, France.

R. FRANKLIN LIGAN, '15, Hospital Corps, 112th Infty, Camp Hancock, Ga.

MANDEL LIGHT, '08, A.E.F., France.

LOUIS G. LINFORD, '16, Sanitary Detachment, 59th Inf. Reg. of Del., Camp Dix.

EDGAR W. LOWE, '11, Medical Dept., Kelly Field No. 1, San Antonio, Texas.

JOHN T. MacDONALD, '05, captain, M.O.R.C., Camp Dix, N. J.

WM. O. MEESE, '16, 154th Depot Brigade, Camp Meade, Md.

ELLIOT H. METCALF, '10, lieutenant, Field Hosp. Div., Camp Meade, Md.

LOUIS FRED MEYERS, '17.

JOHN H. MILLER, Field Hospital No. 22, M.O.T.C. Camp Greenleaf, Ga.

ROBERT C. MOOREHEAD, '14.

RAYMOND J. MOYER, '17, Cadet Hospital, West Point, N. Y.

WM. A. MULLOY, '12, lieutenant, 118th Infty, Camp Sevier, S. C.

ROBERT L. MYERS, '15, Medical Department., Fort Slocum, N. Y.

THEO. M. MYERS, '12, 19th Regt. Engineers, A.E.F., France.

PERCY L. NEELD, Gas Defense Service, Philadelphia, Pa.

JOHN W. OCKER, Medical Corps, 115th Infty, Camp McClellan, Ala.

PRESTON A. PAUL, '16, hospital apprentice, 1st class, Newport, R. I.

RUSSELL C. PAXTON, sergeant, Base Hospital, Med. Dept., Camp Lee, Va.

WM. R. REINARD.

HENRY I. REINISH, '13, Base Hospital, Camp Gordon, Ga.

GEORGE H. REITER, Co. A. 307th Machine Gun Brigade, Camp Dix, N. J.

LOUIS RODIS, '17, hospital apprentice, 1st class, U. S. Naval Reserve Force.

PAUL S. ROGERS, '15, Ordnance Dept., Inspection Section, S. Chicago, Ill.

EDWARD B. ROGERS, '99, captain, Sanitary and Reclamation Office, Gen. Hosp. No. 5, Fort Ontario, N. Y.

WM. O. SCHENCK, '17, Ambulance Corps, U. S. Casualty No. 2, New York.

W. CLEMENT SCOTT, 108th Field Artillery, Medical Corps, Camp Hancock, Ga.

LUMIN SECERA, '10, sergeant, Battery E., 112th F. A., 59th Brigade, 34th Div. Camp Cody, N. M.

DONALD J. SHAW, '17.

GUY W. SHOWERS, '16, American Expeditionary Forces.

PAUL B. SHRENK, 837th Aerial Squadron, Aviation Corps, A. E. F.

JACK SHTOFMAN, '12, Sanitary Detachment, 59th Pioneer Inf Reg. of Del., Camp Dix.

RALPH R. SHUMAKER.

BYRON M. SMITH.

E. HARLEY SONNE, '16, Sanitary Corps, New York.

EDWIN R. SPANGLER, '14, Utilities Detachment, O.M.C.N.A., Camp Meade, Md.

ALTHA R. SPRINGER, lieutenant, Sanitary Corps, Post Dept., Laboratory, Fort Leavenworth, Kansas.

ISAAC W. SPRINGER, sergeant, Sanitary Corps, Camp Meade, Md.

GERALD STEVENS, '13, Gas and Flame Section, Sanitary Corps.

P. SAMUEL STOUT, lieutenant.

WINFIELD SCOTT TAYLOR, JR., '15, pharmacist, Base Hospital, Camp Dix, N. J.

JACOB TESMAN, '96, regimental surgeon, 350th Field Artillery, Camp Dix, N. J.

OSCAR J. TUCKER, '16, Field Hospital, 310th Field Artillery, Camp Meade, Md.

S. WILMER TUNNELL, '04, captain, M.O.R.C., Camp Lee, Petersburg, Va.

LOUIS W. WALZ, '08, 5th Battalion, Co. 17, 153rd Depot Brigade. Camp Dix, N. J.

JAMES S. WAKER, '14, sergeant, Co. H., 311th Infty, Camp Dix, N. J.

ALVIN C. WEBB, '14, Post Hospital, U. S. Proving Ground, Aberdeen, Md.

ABRAHAM WEINER, '14, 115th Reg., Co. C 315th Infty, Camp Meade, Md.

WALTER WHELAN, '16.

OSCAR K. WHIPPLE, JR., '14, Med. Corps, 104th Engineers, Camp McClellan, Ala.

DELL W. YOUNGKEN, '14, sergeant Medical Detachment, 56th Infty, Camp McArthur, Waco, Texas.

FEDERAL TRADE BOARD SUMMONS ELI LILLY & CO. FOR PRICE-FIXING

Specific Resale Price for Jobbers Declared to Be Illegal Discrimination—Complaint Brought Under the Clayton Act Charging Monopoly and Restraint of Trade

Washington, D. C., June 19—A complaint has been issued by the Federal Trade Commission against Eli Lilly & Company, pharmaceutical manufacturers, Indianapolis, charging violations of the Federal Trade Commission Act through unfair methods of competition in fixing the prices at which the drugs it manufactures shall be resold by jobbers and wholesalers, with the effect of eliminating competition in price among these jobbers and wholesalers.

The commission alleges that, for the purpose of maintaining these fixed resale prices, the company has refused and still refuses to sell its products to customers or dealers who will not agree to maintain the standard specified resale prices, or who fail to maintain those prices.

Under the Clayton Act, the company is charged with discriminating in price between different purchasers of drugs, the effect of which discrimination may be and is to substantially lessen competition and tends to create a monopoly. It is charged also that the company, in violation of that act, has fixed and is fixing the price charged for its products and the rebate upon such prices on the condition or understanding that the purchaser shall not use the goods and wares of competitors of the company. The effect of this practice, complains the commission, may be and is substantially to lessen competition and tends to create a monopoly.

A hearing will be held on the complaint next month.

In response to our inquiry J. K. Lilly, president of the Eli Lilly & Co. writes us the following statement for publication:

"Answering your telegram we have only to say at this writing that the complaint issued against us by the Federal Trade Commission, charging us with unfair competition in fixing re-sale prices and refusing to sell to dealers who would not agree to maintain our standard prices, is, we think, the result of our refusal two or three years ago to continue selling a certain western wholesale druggist whose business policy we felt to be inimical to our interests.

"When the case is called for a hearing we believe we will be able to show that there was no impropriety in our action. There is no basis whatever for the charge against us that we have given rebates to our wholesale distributers conditional that they do not use the products of our competitors."

Schools and Colleges

NEW YORK

The address to the graduates at the commencement exercises of the New York College of Pharmacy, held recently in Carnegie Hall, was made by the Hon. William A. Prendergast, the exercises being in charge of Dr. William H. Carpenter, provost of Columbia University, with which the college of pharmacy is affiliated. The graduating class numbered 119, among the members being seven young women.

The names of sixteen students appeared on the honor roll, and the awards of medals and prizes were made by Monroe H. Weil, Phar. D., president of the Alumni Association, on behalf of that organization; John T. Kennedy, LL. B., the award of the Lascoff prizes; Curt P. Wimmer, Phar. D., the Trustees' special prizes and college scholarships; Jeannot Hostmann, Ph. G., the Squibb and Weinstein prizes; and Dean H. H. Rusby, dean, who presented the Dohme, Leiterman and Italian Pharmaceutical Association prizes. The recipients of the awards and their ratings were as follows:

Selma Temliak, 93.5, alumni gold medal, Squibb prize of $100 for best standing in analytical chemical laboratory for two years, $100, Italian Association gold medal for best rating in all laboratories for final year, and Leiterman gold medal for highest rating among woman students for two years; Philip Tishber, 91.5, alumni silver medal, Dohme prize of $100 for highest rating in materia medica; Nathan Miller, 90.83, alumni bronze medal; Anthony Armentano, 88.91, Lascoff prize of membership in the A. Ph. A., Weinstein memorial prize of a microscope for best rating in second year analytical laboratory; Henry C. F. Arnold, 88.58, Lascoff A. Ph. A. membership; Aurelio V. Renzolli, 88.41, and Nathan Tischelman, 87.41: Lascoff prizes of membership in their state associations, Rudolph Krepela, 87.25; Edward Wainger, 86.91, Louis Franklin, 86.75; Jacob Sugarman, 86.58, trustees' analytical chemistry prize of $100; William B. Ginsberg, 86.50; Louis Raskin, 88.41; George A. Schumann, 85.58, trustees' pharmacy prize of $100; Isidore Tanenzapf, 86.58; Pauline A. Reiter, 85.41, trustees' materia medica prize of $100. Senior scholarships from the trustees were awarded to Edward Yanket, 92.23, and Henry Rosenberg, 91.69.

Selma Temliak delivered the valedictory address. The programme contained the names of 184 graduates and undergraduates of the college now in the country's service.

MASSACHUSETTS

With the close of the session of 1917-1918 recently, the Massachusetts College of Pharmacy completed a half century of honorable work, the event bringing together a large number of alumni and friends at the fiftieth commencement exercises which were held in Convention Hall.

The class exercises opened with an address of welcome by Randall H. Greeley, followed by the reading of the class history by Winthrop B. Osgood, the class prophecy by Patrick J. Biesty and the class will by Mildred J. Gilmore. The valedictory address was delivered by R. Tracy Burrows.

At 3 o'clock the members of the graduating class and friends assembled for the closing exercises, over which President C. Herbert Packard presided. The opening prayer was by Rev. A. Sidney Lovett, Jr., and this was followed by an address to the graduates by Peter F. Ward. Dean Theodore J. Bradley presented the candidates for degrees, Secretary Lyman W. Griffin read the roll, and President Packard conferred the degrees, after which there was an award of prizes by Treasurer John G. Godding. Degrees were conferred on the graduates as follows:

Pharmaceutical Chemist: Florin Joseph Arnhein, Roxbury; Leander C. Hood, Turners Falls; Ralph C. Root, Brattleboro, Vt.; Bertha Sugden, Methuen; Irving C. Zatuleve, Hoboken, N. J.; Vincent J. FitzSimon, Brockton; Charles E. Mehigan, Chelsea; Nicholas Rosania, Barranquilla, Colombia; Joseph H. Wildman, New York City.

Graduate in Pharmacy: Patrick J. Biesty, Jamaica Plain; R. Tracy Burrows, Noank, Conn.; Jacob J. Cohan, Boston; Walter L. Dodd, Northboro; Emanuel Goldberg, Roxbury; Michael J. Kearney, Franklin; Patrick F. Mahoney, Cambridge; Clayton F. Randall, Brattleboro, Vt.; Argiris G. Sampanis, Tragano, Greece; David Shapiro, Springfield; Leo D. Steinberg, Dorchester; Paul Rene Vincent, Holyoke; Arthur N. Brown, Boston; Leon N. Charkoudian, Springfield; George F. Curru, Jr., New Bedford; Mildred L. Gilmore, Allston; Randall H. Greeley, Portsmouth, N. H.; Seward A. Leeman, St. Stephen, N. B.; Winthrop B. Osgood, Lowell; Theodore D. Robbins, Brookline; Theodore Sannella, Revere; George Small, Chelsea; Michael D. Vamvas, Manchester, N. H.; Joseph P. Yaffe, Boston.

The program was interspersed with music by the Salem Cadet Orchestra.

PITTSBURGH

The School of Pharmacy of Pittsburgh University, in conjunction with the other departments of that institution, held its commencement exercises on May 31, President William Henry Crawford of Allegheny College delivering the address to the graduates. Music was furnished by the University Band. Degrees were conferred upon the following:

Graduate in Pharmacy: Thomas Lee Algeo, Harvey Clayton Anderson, Henry Bluestone, Carson Henderson Brady, Cormick Francis Breslen, Michael Peter Bumbera, Richard Joseph Day, Edward Curry Dwyer, Joseph Griffith Farquhar, William George Felix, William Leo Fleckenstein, Stanley Trimble Fleming, Lawrence Francis Fox, Amabel Mathilda Gardill, Henry Andrew Geyer, Dante Aligihieri Guisti, Norman Edwin Hallman, Oscar Lewis Harris, Walter Earl Hawthorne, Clarence Matthews Hill, John Lee Hilliard, Edward Henry Hoak, Ralph Richard Hofmeister, Philip Hoffman, Robert Raymond Hull, Gilbert Bryan Johns, John William Kaszer, Elwood Milton Keagy, Albert George Kessel, Jacob Klein, Anthony Aloysius Kobelak, Samuel Larson, Joseph Hanes Lash, Curtis Lefkowitz, Abraham Litman, Robert Leonidas Lohmire, Vance Robert McBane, Michael Francis McNerney, Earl Evans Moran, John Addison Morron, Ralph Eugene Murtland, David Nathanson, James Anthony Palange, William Henry Rawson, John Edwin Reed, John H. Robertson, John Moore Royston, Henry Allen Sanders, Paul Whyman Schminkey, Richard Calvin Scollon, Harry Segel, William Jennings Stewart, William Jacob Stutz, Michael Jeremiah Sullivan, Joseph Tarnapowicz, Edward Gerald Wambaugh, William Donald Wardlaw, Howard Marshall Young.

Doctor of Pharmacy, Juan Bautiste Santos (Fonseca).

Pharmaceutical Chemist: Roth Eardon Weimer, Joe Parks Thomas.

Messrs. Brady, Dwyer, Fleming, Fleckenstein, Hilliard, Lash, McNerney and Murtland, are in the United States military service. The following were graduates for degrees in the Class of 1918, but entered Government service and were granted special service certificates: Lothaire Eppleman Crouse, William Penn Hoover, Jr., Donald Carl Jefferson, Paul Hanson Ross, Lloyd Francis Seese, William Koofer Stimer, Thomas Edward Trimmer, Michael Sylvester Wargofchik.

Certificates of proficiency in materia medica and chemistry were awarded to the following: Margaret Josephine Fogerty, Harry Gordon, Elizabeth Wilson Hurst, Samuel Kleinman, John David Milligan, Joseph Polanski, Joseph Mario Sgarlata, Hyman Silverman, August Henry Sprock, Ethel Margaret Swan.

UNIVERSITY OF MARYLAND

Among the twenty-two graduates in the department of pharmacy who received diplomas at the recent annual commencement of the University of Maryland were two Chinese—George K. How and Yindah Hsi. Both made very creditable records. The list of pharmacy graduates is as follows:

Maryland—H. Westfield Demarest, Walter G. Griggs, Acquilla Jackson, Walter E. Kratz, Benjamin A. Kriger, Baden Lathroum, Irvin Millenson, Jerome Edward Murphy, William F. Reindollar, Leo C. Rettaliata, Louis H. Simson, Simon Solomon, William Frederick Voshell, William Ewing Waples and Ray Moseley Smith.

North Carolina—Joseph Hollingsworth and Walter A. Lowrey.

South Carolina—Harold P. Morrison.

West Virginia—George E. Black and Lester Scott Corrick.

China—George K. How and Yindah Hsi.

The Law, Medical and Dental Schools of the university held commencement exercises at the same time, the aggregate number of graduates turned out being several hundred.

BUFFALO

The pharmacy department of the University of Buffalo played a prominent part at the 72nd annual commencement exercises of that college at the Teck Theater, on June 7. Successful candidates for the degree of graduate in pharmacy were: Hasha Alpert, Lester R. Bengel, Louis J. Birmingham, Nina Bogorad, Charles Arthur Bond, William H. Chapman, Vesta Inez Cole, George G. Cooley, Alfred Corti, Leon B. Curtiss, Edward J. Donohue, Evelyn May Drefs, Casmir A. Dworzanowski, George B. Ehrbach, Arthur R. Erwin, Ruth A. Fuller, Catherine M. Gallagher, Joseph Geraci, Samuel R. Gervaise, Jos. A. Grzenkowski, Celia Harris, Leon A. Heffer, Mary A. Horton, Francis B. Laszewski, Edgar F. Miller, Nicholas Mogavero, Charles F. Mulloy, Leslie I. March, John A. Napieralski, Charles Orlando, Merton R. Parmenter, Ignatius E. Polowy, Louis Reisman, Soloman B. Riffman, Floyd S. Russell, Charles I. Saidman, Nathan Sandler, Theodore L. Schmitz, Louis Segel, J. Howard Smith, Samuel H. Villa, Lester J. Ward.

Post-graduate degree, master in pharmacy—Harry Edward Hotchkiss, Ph. G.; John Forrest Kelley, Ph. G.

Post-graduate degree, pharmaceutical chemist—Stratton Walley Bower, Ph. G.; Loretta Viola Caulfield, Ph. G.; Norman Charles Paul, Ph. G.

Degree of analytical chemist: Louise Agnes Abraham, John Hackley Bishop, Theodore Edward Carl, Elmer George Croakman, Howard H. Dellinger, Eugene Louis Gabriel, Edmund Bernard Gavin, Frank Harrison, Jr., Ph. G., Phar. M., Katherine Sara Holmes, Harold M. Kamp, Spencer C. Kimmel, Clarence Hall Mitchell, John William Riezinger, Marvin David Scott, Ph. G., Ph. C., Theresa Marie Susemihl, John Buckley Vernoy, Ph. G., Phar. M., Herbert William Wagner.

Thirteen of the graduates, it was announced, were in the military service of their country.

The exercises were conducted by Chancellor Charles P. Norton. The address to the graduates was delivered by Frederick C. Ferry, LL.D., president of Hamilton College, whose topic was, "College Education and the War."

The Peabody prizes were awarded for excellence in work and standing by Dean George S. Squire. The first prize of $50 was won by Lester Ward of Weedsport and the second prize of $25, by Robert Ritz of Gowanda.

The honor roll contained the following names: Pharmacy graduates, Lester Ward, Weedsport, 95.7; Evelyn Drefs, Buffalo, 91.5; George Erbach, Mount Morris, 89.9; Louis Segel, Elmira, 89.4; Ignatius Polowy, Buffalo, 89.3; Louis Reisman, Buffalo, with the colors. Analytical chemistry graduates—Theresa Susemihl, 94; Katherine Holmes, Cobalt, Ont., 90.3.

Pharmacy freshmen—Robert Ritz, Gowanda, 95.1; Violet Green, Hilton, 93; Kenneth Bennion, Attica, 92.9; Edwin Terhune, Randolph, 92.8; Joseph Jackson, Cleveland, 92; Laurence Lockie, Buffalo, 91.9; John Ripton, Le Roy, 91.9.

PURDUE UNIVERSITY

Purdue University closed the present college year on June 8, the baccalaurate address being delivered on Sunday June 9, by Lieut. Perigord of the French Army. Following the usual exercises of Senior Day, June 10, and Alumni Day, June 11, the commencement was held on June 12, Ex-Senator Albert B. Beveridge delivering the address to the graduates.

In conjunction with the coming meeting of the Indiana Pharmaceutical Association, which is to be held at the University, the alumni of the School of Pharmacy will hold a reunion and banquet, many hundreds of whom it is expected will attend. Plans are completed to make it the banner event in the history of the school.

The demand for clerks and chemists has been greater this year than ever before. The School has been unable to fill more than a small percentage of these demands.

The following lectures have been given before the students: "Psychology of Advertising" by Prof. Tapy of Wabash College; "Business Dynamics" by H. S. Noel of Eli Lilly & Co., Indianapolis; "Homeopathic Medicine" by Dr. C. B. Kern, LaFayette, Ind.; "Man and his Job" by Professor Roberts of the Education Department; "Banks and Banking" by Wible Hiner of the Purdue State Bank; "Courtesies to the Customer," by Miss Thomas of LaFayette Vocational School.

This is the first year that all pharmacy students have been required to take military training. The success of the change is very perceptible. The boys are enthusiastic concerning the work and the exercise involved in it has been beneficial to their general health.

The Purdue University service flag now has 1900 stars, and of these 65 are for members of the school of pharmacy. The men from the school of pharmacy are classified as follows: 11 commissioned officers, 22 non-commissioned officers, one chief pharmacist (Navy), 5 pharmacists (Navy), and 25 privates. Among the commissioned officers there are one major, one captain, and nine lieutenants. The men are distributed in the service as follows: 27 in the Medical Corps, 18 Infantry, 8 Navy, 3 Engineers, 3 Gas Defense, 2 Sanitary Detachment, 2 Mechanics, and 2 Aviation.

Lieut. J. B. Burt of Camp Taylor visited his college friends recently and attended the Purdue-Ohio game. Lieut. Burt received his commission in the First Officers Training School, and has taught in the Second and Third School. He has made a success of his army work, and has been recommended for commission as captain.

Sergt. F. E. Crabb of Ft. Riley, Kansas, recently visited his brother R. W. Crabb, Purdue '19. Mr. Crabb has been in the Gas Defense Service since his enlistment and has instructed many detachments in Gas Defense. He has been recommended for a commission as 1st lieutenant.

UNIVERSITY OF ILLINOIS

The fifty-ninth annual commencement of the University of Illinois School of Pharmacy was held in conjunction with the other Chicago departments of the University on Saturday, June 8th, at the Studebaker Theatre, Chicago. The degrees were conferred as follows:

Pharmaceutical chemist: George Matthew Campbell, Hattie Adela Dyniewicz, Josephine Marion Dyniewicz, Hans Wagner Vahlteich.

Graduate in Pharmacy: Neff Kuyper Bakkers, Edgar Baldwin, Christopher Barone, Frederic Alvin Bengston, Paul Bronner, Harold Ivan Early, Julius Sylvester Fahrner, Anton Harry Florian, Wallace Joseph Formhals, Karl William Frase, Richard Emmanuel Grenberg, Arthur Gustav Grosse, Ervin John Haeberle, Leslie Allen House, Alexander Carl Mayerson, Pauline McClure, Hubert Fred Owens, Frank Daniel Person, Victor Humberto Perez, Harold Allen Shindler, William Charles Spanier, Russell Myers Stewart, Raymond Lee Thompson, Joseph A. Unger, Earl Harold Unseth, George Washington Wood, Arnim Robert Wyle, Ednah Blanche Anderson (Class of '17), Andrew Carl Friedley (Class of '17), William DuBroff (Class of '16), Cecil McCanse (Class of '16), Reuben August Rylander (Class of '16), Jeanette Sikucka (Class of '16), John George Vlazny (Class of '16), Louis Wischnia (Class of '15).

The certificate of the school of pharmacy was conferred upon the following candidates who were lacking either in the age or practical experience required and who will come up for the degree later: Georgina Bower, Lewis P. Brockhoff, Ethel Marie Carlson, Walter H. Dimond, Arno Fritschell, Alfred Richard Johnson, Waldemar Arthur Koelbel, Wilfred Ignatius Menard.

The prizes were awarded as follows: Alumni medal, Miss Pauline McClure. The Leo L. Mrazek prize, Harold Shindler; the Herman Fry prize, Miss Ethel M. Carlson; the Andrew Scherer prize, Wallace J. Formhals. A. Ph. A. Memberships—Russell M. Stewart, Neff K. Bakkers, Alfred R. Johnson and George W. Wood.

Nine of the graduates receiving degrees, it was announced, are serving with the colors.

The Alumni banquet in honor of the graduating class was held at the Hotel Sherman on Thursday evening, June 6, the Alumni of Northwestern University School of Pharmacy joining in extending a reception to the new graduates.

The first of the students in the School of Pharmacy to make the supreme sacrifice was Burt H. Ward, a member of the senior class, who enlisted in the Hospital Corps of the Army last December and who died at Ft. Oglethorpe, Ga., May 23rd. Interment was at his home, Toulon, Ill., on the 27th. The senior students and members of the Kappa Psi Fraternity to which Mr. Ward belonged, sent flowers and condolence to his mother.

PHILADELPHIA

At the commencement exercises of the Philadelphia College of Pharmacy, held in the American Academy of Music, Philadelphia, on June 5, degrees were conferred on 160 members of the graduating class. The degree of Ph. M., *Honoris Causa,* was conferred on Prof. E. Fullerton Cook and Otto Raubenheimer, Ph. G., of Brooklyn, N. Y.; Robert P. Fischelis, W. Wilson McNeary, and Paul S. Pittenger, receiving the same degree in course. Following the conferring of the degrees, the address to the graduates was delivered by the Rev. Charles A. Eaton, and then came the announcement and awards of prizes.

The Proctor prize, a gold medal and certificate, for the highest general average of the class with a meritorious thesis, was awarded to Harold Berlin Snyder, who was also the winner of the William B. Webb Memorial prize, a gold medal and certificate; the Materia Medica Prize, $25; the Analytical Chemistry prize, $20 in gold; the Operative Pharmacy Prize, $20 in gold; the Mahlon N. Kline Theoretical Pharmacy prize, a Troemner agate Prescription Balance, and the Pharmacy Review prize of a year's membership in the A. Ph. A., offered by Prof. LaWall. Charles Franklin Slotter was the recipient of the Chemistry prize of $25; Henry Clay Newson received the Microscopical Research prize, a compound microscope, and Ricardo (Birba) Garcia, the Commercial Pharmacy prize, $20 in gold, offered by the late Prof. Joseph P. Remington. For meritorious work in the Post Graduate courses, Adley Bonisteel Nichols received the Pharmacy prize of $20; Elisa di Silverstro, the Maisch Botany prize; Herbert Carl Raubenheimer, the J. B. Moore Memorial prize, a Troemner agate prescription balance and the Advanced Pharmacy prize, $10; John R. McLaughlin, the Industrial Chemistry prize, $20, and the Chemical Control prize, one year's membership in the American Chemical Society, offered by Prof. C. E. Vanderkleed.

The announcement was made that three years more are needed to complete a century of the college's existence. To date, the institution has graduated more than 7000 professional pharmacists, and its living alumni number about 5000.

The Alumni reunion, held at Kugler's dining hall on the evening of June 4th, was attended by more than 250 graduates. Dean LaWall was toastmaster. A feature of the exercises was the brilliant impromptu address of Ricardo Garcia, a Cuban member of the graduating class, which kept his audience spell bound and fixed his reputation as an orator.

The members of the faculty at the conclusion of the year's work, gave a testimonial dinner to Prof. Freeman P. Stroup, in appreciation of his services in arranging examinations and other matters throughout the year.

IOWA UNIVERSITY

The commencement exercises of the college of pharmacy of the University of Iowa, were held in conjunction with the other departments of that institution on June 12, the baccalaureate sermon being delivered by the Rev. Charles Reynolds Brown, D.D., dean of the Yale School of Religion, who received his B. A. degree from Iowa University in 1883 and the address to the graduates was delivered by Governor Frank O. Lowden of Illinois, who received his B. A. degree at Iowa in 1885, and on whom was conferred the honorary degree of LL. D. this year.

The following students received degrees: M. A. Chehak, J. R. Doden, Sherman Morrison, A. G. Rollins, J. M.

Windsor. The number of graduates is far below normal because of so many going into the service of their country. Since the last June commencement, four degrees have been conferred; at the end of Summer school, B. B. Downing, H. A. Stedman, Ko Suto; at the end-year convocation, N. J. Nemmers.

The usual prizes were given this year. The nomination to membership in the A. Ph. A., offered by Dean Teeters to the senior who in competitive examination is rated highest in recognition and description of organic drugs was awarded to J. R. Doden, of Wilton, Iowa. Britton and Brown's Illustrated Flora, offered by Senator John M. Lindly, '39, of Winfield, to the senior who attains the highest average in vegetable microscopy was awarded to Sherman Morrison of Iowa City. Mr. Morrison also received the nomination to membership in the Iowa Ph. A., offered by Prof. Zada M. Cooper, to the senior attaining highest rank in practical pharmacy. The nomination to membership in the American Pharmaceutical Association offered by Gus Scherling, of Sioux City, to a senior for general excellence in organic chemistry both laboratory work and scholarship being considered, was awarded to Clarence Wierks, of Hospers, Iowa. A year's subscription to the Journal of the A. Ph. A., offered by Prof. R. A. Kuever, to the Junior student attaining highest rank in practical pharmacy was awarded to P. A. Dahlen, of Rock Island, Ills.

The Alumni luncheon was held in the women's gymnasium immediately after the commencement exercises. Speeches were made by Governor Lowden, President Seerly of the Teachers' College, D. D. Murphy, president of the Board of Education, Miss Klingenhagen, dean of Women, Miss Gwendolin McClain and Dr. W. A. Jessup, president of the University.

FORDHAM UNIVERSITY

At the commencement exercises of the college of pharmacy, held on June 12 in conjunction with the other departments of Fordham University, Hon. David I. Walsh, a former governor of Massachusetts, delivered the address. The Rev. Father Joseph A. Mulry, S. J., president of the University, also made an address in which he recounted the deeds of heroism of Fordham's men who, a year ago, had enlisted in the Fordham Ambulance Unit. He also accepted the gift of a completely equipped ambulance given by the St. Elizabeth's College of Convent Station, N. J., to the Fordham boys now in France. The commencement exercises were held on the college campus, three thousand guests being present.

Dr. Jacob Diner, dean of the college of pharmacy, read the names of the graduates, which represented 100 per cent. of the students of the 1918 class, and as each man marched up, the pharmacy hood was placed on his shoulders and his diploma given him. Names follow:

Morris Adoff, Max Bergman, Isaac Berniker, Benjamin Billig, James Cicatelli, Simon Doniger, Irving A. Edelstein, Bernard Eolis, Albert Fainland, Isaih Flomenbaum, Henry Frank, Louis Friedman, Samuel Goodman, Joseph Greenberg, Max Hager, Max Heimovitch, David Israel, Joseph Kerr, Julius Kerr, Nathan Kerr, Alexander Kornfield, Bruno Kanders Kuhe, John D. Lore, Max Matlin, David R. Mantel, Bernard Miller, Jacob Moonves, Eugene Nagin, Eugene O'Kane, Julius Pakchar, John Poalantonio, Frank Paratore, Lawrence Pedroni, Oreste Petretti Haary Rabinowitz, Naftulherz Riaboy, Flower Riegi, Joseph Samsonoff, Joseph Shapiro, Charles Shavel, Charles Siegel, Charles Silkes, Abraham Simches, Abraham Soloman, Samuel Stein, Joseph Vaccarino, and Sidney Weinstock.

The prize winners were Joseph Greenberg, who received the Alumni medal for obtaining the highest average in all subjects; Bruno Kanders Kuhe, the Bronx County Ph. A. gold medal for the highest average in the subject of pharmacy; and Joseph Samsonoff, the N. Y. Ph. A. prize for the third highest man in average marks. The Honor Graduates who attained an average of 90 per cent. and over were; I. Berniker, S. Doniger, S. Goodman, J. Greenberg, D. Israel, B. K. Kuhe, D. R. Mantel, E. O'Kane, J. Samsonoff and A. Simches.

Many of the graduates appeared in Uncle Sam's uniform, having enlisted since the close of the class. Irving A. Edelstein of the class, received the appointment on the faculty as instructor in chemistry to succeed Otto F. A. Canis, Ph. G., who enlisted.

At the close of the exercises, Dr. Gustave Horstmann gave each man an alumni certificate, as the entire class had joined the Alumni Association which promises to become an active factor in pharmacy.

CLEVELAND

Despite that war times had made great inroads on the classes of the Cleveland School of Pharmacy during the past year, a representative group were awarded diplomas at the 37th annual commencement exercises, held in conjunction with the other departments of Western Reserve University at the Euclid Avenue Presbyterian Church, forty members of the class, including five women, receiving diplomas. Louis C. Hopp, vice-president of the school presided at the reception following the commencement, Dr. Henry S. Prichett, president of the Carnegie Foundation for the Advancement of Education being present.

Dr. Edward Spease, dean of the school, stated that higher percentages were attained by the graduates this year over those of previous years, both in attendance and scholastic ability. The prize winners were; Fabian J. Catalano, trustees' prize for highest standing in the senior class; Fred W. Herget, trustees' prize for highest standing in the junior class; Frank M. Hladky Alumni medal, for the best general average in pharmacy, and Max A. Zielinski, membership in the A. Ph. A., for the best general average for the entire course, donated by Mr. Hopp. Miss Emma M. Dora, on behalf of the graduating class presented an analytical balance to the school, which was accepted by Edward F. Hellwig, a member of the board of trustees, and former president of the Northern Ohio Druggists' Association. Besides their certificates of graduation, each student was presented with a certificate from the Red Cross as evidence that each had satisfactorily passed the course in first-aid work under the direction of Miss E. M. Hanson.

Following is a list of the graduates of 1918:

Pharmaceutical Chemist: Fabian Joseph Catalano, Alfred William Cipra, Mary Cecile Gouvy, Frank Martin Hladky, Alexander E. Karklin, Solomon Philip Lindner, Ellsworth Walker Underwood.

Graduate in Pharmacy: Reuben S. Adelstein, Jacob C. Benjamin, Maurice A. Biel, Cecil Bovee, Walter Edward Broge, Anna Marie Dora, Paul Howard Freedman, David Henry Glicksman, Marie Frances Grabkowski, Mary Sophia Grabski, Jacob Philip Hagen, Adolph Klettke, Abraham C. Kurlander, George Leo McMahon, John J. McMillan, Frank Mannino, Nathaniel H. Margolis, Hyman Joseph Mervis, J. Herman Morrow, Milton Moss, Cornelius Patton, Leslie Alton Raymond, Paul Edward Ream, Samuel H. Rosen, John P. Schneider, Anthony G. Schreiner, Leonard S. Silverstein, Louis Svetlik, Jacob I. Tucker, Maximilian A. Zielinski.

Roll of Honor: Seniors—Fabian Catalano, Max A. Zielinski, Frank M. Hladky, Louis Svetlik, David H. Glicksman. Juniors—Fred W. Herget, Meyer Selzman, Herschel R. McVay, Edmund F. Funk, Leo V. Coble.

Dean Spease announced that during the past few months the number of stars on the school's service flag had been growing, there now being about forty students enrolled in the Government service.

Professional & Trade Associations

MISSOURI FOR COUNTY ORGANIZATION

The Missouri Pharmaceutical Association convened in fortieth annual session at Excelsior Springs, June 12-14. The Missouri Pharmaceutical Travelers' Association was in twenty-sixth annual session and the Ladies' Auxiliary met for the fourth year. The attendance nearly equaled that of 1917 in spite of the shortage of clerks, increased railroad fare and hotel charges. Of the Mo. Ph. A., 109 registered. The Travelers recorded seventy members, while the ladies and girls numbered 83. The proper conduct of the drug business under war conditions and what pharmacists can do in the prosecution of the war constituted the ruling thought in all of the discussions.

This year, the recognition of women was emphasized by the election of Minnie M. Whitney to the presidency. The employment of women in drug stores contributed a topic for an experience meeting, the general conclusion being that women are particularly fitted for pharmacy and that in these war times women can relieve the great strain on help.

Commercial pharmacy came to the front as usual. The Stephens Bill was re-endorsed. C. E. Zinn headed a discussion on the relation between selling price and cost price. Alfred W. Pauley presented his scheme of drug store accounting which attracted much attention and elicited many questions.

The coming winter, the Missouri legislature will be in session and very naturally the pharmacy law was under discussion. Missouri is about ready for a law which will make every registered pharmacist a member of the state association. An amendment to that effect was endorsed for the present law. The pre-requisite question came up for the first time and, after a heated and prolonged discussion, pre-requisite was endorsed by a vote of twenty-six to twenty-one. The Committee on Legislation was instructed to work for an amendment providing for pre-requisite as it is now in force in Illinois and many other states. Other legislative topics were considered, when a letter was read from Dr. James H. Beal who had expected to be present. His communication led to action condemning the proposed compulsory health insurance and urging the appointment of pharmacists in all positions where it is necessary to interpret or administer a law directly affecting druggists as a class. The Missouri Committee was also instructed to watch proposed prohibition laws and see that they do not impose unjust burdens on the drug trade or cast reflections on legitimate pharmacy.

Perhaps one of the most important moves made by the association was a proposed campaign for county organization. The Board of Pharmacy will co-operate in this matter and it is believed that much will be added to the efficiency of the Mo. Ph. A. by proper county societies.

An innovation was decided on regarding committees. Only chairmen have been appointed. Each chairman is authorized to select his own associates. He is instructed to mention in his annual report, next year, only such members of his committee as have rendered real service to him in his work.

The number of new members exceeded that of last year and reached 107. The total membership is now 735 and the cash balance about $500.00.

Paul L. Hess reported for the Board of Pharmacy. Missouri has 4918 registered pharmacists and 169 assistant pharmacists. R. A. Doyle, of East Prairie, was unanimously nominated and the governor requested to appoint Mr. Doyle as his own successor on the board. An examination for registration was held, the first two days of the week and thirty-seven candidates took the examination.

The 1919 meeting will be held, June 10-13, at the handsome, spacious and comfortable Elms Hotel, Excelsior Springs.

President Minnie M. Whitney announced the following chairmen of committees for 1918-19: Deceased Members, F. R. Dimmitt, Kansas City; Drug Adulterations, A. W. Estabrook, Kansas City; Exhibits, Paul L. Hess, Kansas City; Legislation, Gus A. Fischer, Jefferson City; National Formulary, D. V. Whitney, Kansas City; Membership and Attendance, L. A. Seitz, St. Louis; Papers and Queries, Francis Hemm, St. Louis; Trade Interests, Alf. W. Pauley, St. Louis; Pharmacopoeia, Wm. Mittelbach, Boonville; Welcome, A. M. Howard, Excelsior Springs; Candidates for Board of Pharmacy, Wm. Mittelbach, Boonville, Mo.; Historical Pharmacy, Leo Suppan, St. Louis; Rexall Members, W. M. Federmann, Kansas City; Entertainment, R. S. Ford, Excelsior Springs; Auxiliary Committee on Legislation (One in each Congressional district); Delegates to American Pharmaceutical Association: Paul L. Hess, Kansas City; Mitchell Block, Excelsior Springs; Charles Gietner, St. Louis.

The Missouri Pharmaceutical Travelers' Association elected the following officers for 1918-19: President, Roy Walker, Kansas City; first vice-president, J. D. Riley, St. Louis; second vice-president, A. F. Goetze, St. Joseph; third vice-president, Carlton Coon, Golden Colo.; treasurer, George W. Bennett, Kansas City; assistant treasurer, H. F. Brooks, Kansas City; secretary, W. R. Adelsperger, Kansas City; sergeant-at-arms, J. T. Goldsmith, St. Joseph.

The Ladies' Auxiliary of the Mo. Ph. A. and the Mo. Ph. T. A. elected the following officers for 1918-19: President, Mrs. J. H. Barnes, Liberty; first vice-president, Mrs. Ed. G. Schroers, St. Joseph; second vice-president, Mrs. R. S. Stevens, Kansas City; third vice-president, Mrs. A. L. Ferguson, Columbia; recording secretary, Mrs. R. S. Ford, Excelsior Springs; corresponding secretary, Mrs. G. G. Murray, Gallatin; treasurer, Mrs. C. W. Loomis, Kansas City; auditor, Mrs. C. E. Zinn, Kansas City.

SPOKANE DRUG CLERKS FORM UNION

Drug clerks of Spokane have organized a union and have secured affiliation with the American Federation of Labor.

Following their organization, these officers were elected: A. C. Dukelow, president; J. S. Ellis, first vice-president; N. E. Bersing, second vice-president; A. F. Maxwell, financial secretary and treasurer; C. D. Wall, recording secretary; A. C. Johnson, F. H. Davison and C. C. Welch, trustees; E. C. Miller, guide; L. A. Taber, guardian.

The Spokane union will be known as Local 1202, Retail Drug Clerk's International Protective Association. President Andy Olsen and secretary Whitemarsh of the retail clerk's union assisted in the installation and initiation. The drug clerks claim to have 90 per cent. of the men of their calling in the organization, estimating the total number of registered clerks in the city at 75.

A. C. Dukelow was chosen as a delegate to the state convention, which will be held at Seattle early in July. No demands for changes in working conditions are contemplated by the local union until after the state convention.

The association passed resolutions deploring the action of the executive committee of the State Pharmaceutical Association in deciding to hold the annual outing of the druggists on a steamship on Puget Sound, on the ground that to use a ship for such social gatherings for two or three days is unpatriotic and inimical to the welfare of the Government when there is such an urgent demand for ships for legitimate uses connected with the war.

NEW JERSEY ENDORSES EDMONDS BILL

The forty-eighth annual convention of the New Jersey Pharmaceutical Association was held on June 19-21, at the Hotel Essex and Sussex, and Sussex, Spring Lake. Because of the shortage of help and other contributing causes occasioned by the war the attendance was considerably smaller than in previous years. The proceedings were of an important character, however, and serious attention was given to the papers and discussions as well as to the business of the meeting.

The association went on record as endorsing the Edmonds measure providing for the adequate recognition of pharmacists in the Army and members will promote an active campaign along the line of interesting the public in the bill. President George M. Beringer, Jr., of the National Pharmaceutical Service Association announced that the Edmonds Bill would be one of the subjects discussed at the national Rotary convention in July.

The convention declared itself opposed to compulsory health insurance. Other proposed legislation including that on prohibition and the consolidation of the various state licensing boards was discussed.

The proposed plans for a federation of pharmaceutical organizations were explained by Dr. H. V. Arny, of New York, chairman of the A. Ph. A. committee appointed to take up the matter of the federation. The subject was discussed at length. No action was taken, but the prevailing opinion seemed to be that the proposed federation was not feasible.

A number of interesting papers were read, and some of the reports of committees were made subjects of exhaustive discussion. Among the papers was one on "Practical Information on Biological Products for the Retail Dealer," by Dr. Robert E. Fischelis. This paper set forth clearly the opportunities for the profitable handling of serums, antitoxins and vaccines, and advanced information of value as to the production and proper methods of keeping this class of merchandise.

Prof. E. Fullerton Cook read a paper on Dichloramin-T; Prof. Raubenheimer of the New Jersey College of Pharmacy read one on peanut oil and Dr. Fischelis one written jointly by himself and Dr. Hugo Schaefer on methods of increasing prescription business. Dr. Geo. C. Diekman, of the New York College of Pharmacy explained the new law relating to licensing junior pharmacists in New York. There were several other papers on various subjects, and all were discussed at length.

Dancing was enjoyed on Wednesday evening, and on Thursday evening the Travelling Men's Auxiliary provided an excellent entertainment. The ladies, of whom a goodly number were present, were entertained with automobile rides to nearby points of interest. The weather was ideal, except for the temperature, which which was rather cool for a sea shore resort and discouraged such diversions as bathing.

A meeting of the Travelling Men's Auxiliary was held Thursday morning and the Woman's Auxiliary met on the afternoon of the same day.

SERVICE ASSOCIATION ELECTS OFFICERS

The June meeting of the National Pharmacuetical Service Association, which was also the annual meeting of that body, was held at the Philadelphia College of Pharmacy, June 11th. President Beringer reviewed the efforts of the Association in drafting the Edmonds Bill and having it introduced, and made a plea for greater co-operation on the part of pharmaceutical bodies generally, in making the movement for the Pharmaceutical Corps a success. Secretary Robert P. Fischelis reviewed the propaganda work carried on and announced that the membership now totaled about 1400.

All of the officers were given a vote of thanks for their efforts during the year and the following were elected to serve for the term of 1918-19: President, George M. Beringer; vice-president, Charles H. LaWall; secretary, E. Fullerton Cook; treasurer, Josiah C. Peacock; executive committee, Joseph W. England, Philadelphia; C. A. Mayo, New York; Eugene G. Eberle, Philadelphia; Samuel C. Henry, Chicago; Louis Werner, Cincinnati; Ambrose Hunsberger, Philadelphia; Robert P. Fischelis, Philadelphia; F. E. Stewart, Philadelphia; William D. Robinson, Philadelphia.

Communications regarding the work of the Association and applications for membership should henceforth be addressed to Prof. E. Fullerton Cook, secretary, 145 North Tenth St., Philadelphia.

DETROIT BRANCH ELECTS OFFICERS

At the May meeting of the Detroit Branch of the American Pharmaceutical Association the following officers were elected for the coming year; president, E. R. Jones; vice-president, G. M. Schettler; secretary, May Strawn; treasurer, Charles F. Mann; chairman of the program committee, G. M. Grommet; councillor, L. A. Seltzer.

The branch went on record as favoring the passage of the Edmond's bill for the establishment of a pharmaceutical corps in the army, and the secretary was directed to send a letter to all representatives and senators of the State of Michigan in Congress to this effect.

Miles Turpin, general sales agent of the Todd Protectograph Co., gave an interesting talk on check protection as carried out by the system marketed by his company. The complete outfit includes a machine and special paper which protects the name of the person whose signature is appended to the check, as well as the amount to be paid Since the laws of the United States say that a person must pay all that is above his signature on a check he called attention to the fact that a man who has small capital needs protection even more than large concerns which can charge items lost in this way to profit and loss accounts.

W. A. Hall, Ph. B. presented some interesting and unusual prescriptions to the members for their comments as to the best methods of compounding. These developed an interesting discussion.

A vote of thanks was given to the speakers of the evening and also Dr. A. B. Stevens, dean of the College of Pharmacy, University of Michigan, in recognition of his interest in the branch and for his attendance at the meetings. The retiring president Ernest Kimmich, expressed his appreciation of the co-operation extended to him by the members during his administration and formally turned the office over to his successor Mr. Jones, who gave a short inaugural address. The next meeting will be held in October.

Women in Pharmacy

CONDUCTED BY EMMA GARY WALLACE

AROUND THE CIRCUIT

Chicago Chapter, No. 2 of the W. O. N. A. R. D., held its annual luncheon at the Hotel La Salle, May 14. There was a large attendance and Patriotism was the keynote of the affair, and an orchestra discoursed stirring music of a military character.

The guests of honor of the day were those members who have sons and brothers in the United States Military Service. These ladies and the officers were seated at a table, the special decorations of which were flags and red and white roses. In the name of the Chapter, Mrs. Joseph Forbrich, the retiring president, presented a unique Service Flag, carrying the number 14, there being fourteen sons and brothers of members now in the service. The women members of the Chapter who have given to their country are: Mrs. F. J. Berger, Mrs. Charles Foucek, Mrs. H. J. Holthoefer, Mrs. Ida Lehman, Mrs. J. A. Mahaffy, Mrs. Albert Schreiner, Mrs. W. R. Young, and Mrs. A. G. Wiese. The names of the sons are: Arthur Berger, Camp Mills, N. Y.; Sergeant Charles Foucek, New York; Mark J. Holthoefer, Fort Sam Houston, Texas; Corporal Kerlin Lehman, "Somewhere in France"; Raymond Mahaffy, Great Lakes, Ill.; Albert Schreiner, Camp Sevier, S. C.; Leonard Young, "Somewhere in France."

The program was in charge of Mrs. J. H. Riemenschneider, who is chairman of the War Relief Work, and Mrs. C. R. Walgreen, chairman of the Program Committee. Carl N. Wertz, president of the Chicago Academy of Fine Arts, gave an interesting talk on "Design and Its Uses as Demonstrated in Dress." He brought out very plainly that conservation is in keeping with beauty and harmony of attire, and that simplicity of the right sort is in the best of taste. Living models from the Chapter were used to demonstrate the effectiveness of the different styles.

The Chapter announced that its total sale of Liberty Bonds is $3,450; its sale of Thrift Stamps to date of meeting, $450. Mrs. J. Weireter gave this report as Chairman of the Patriotic Fund Committee.

On May 21st, the Chicago Chapter ladies enjoyed a delightful excursion to Hubbard Woods. Everyone carried a box of lunch, and the ladies visited the studio of Adam Emory Albright, the well-known painter.

The Mary Thompson Hospital of Chicago, is much pleased with the work of hospital pharmacist Miss Bertha Reisman, who graduated in 1907.

The women students of the Chicago School of Pharmacy have formed Gamma Chapter of the Lambda Kappa Sigma. Its officers are Miss Georgina Bower, president; Miss Pauline McClure, vice-president; Mrs. Neff K. Bakkers, secretary-treasurer. It is expected that there will be many women students among the fall enrollment and the newly formed sorority for women is bound to find a field of broad usefulness.

Smith, Kline & French Co., of Philadelphia, entertained the College of Pharmacy graduates in that city during Commencement Week, the students visiting the laboratories and spending considerable time watching the preparation of medical supplies. A repast was served at which Clarence M. Kline presided.

Among the graduates of the P. C. P. was Miss Ruth Everest Sparks, of Burlington, N. J., the first recipient of the Women's Organization scholarship.

Mrs. M. E. Selzer, proprietor for fifteen years of the pharmacy at Menlo Park, Cal., recently passed away at the age of fifty-seven years. She was long identified with the drug business, her first store being located at Palo Alto.

The May meeting of the B. A. R. D. was held at the home of Mrs. Mary R. Green, its president, in Newton Highlands. Mrs. Twitchell, first vice-president and Mrs. Corner, second vice-president assisted. Mesdames Klitzke, Gammon, Connolly, and Casarella had charge of the luncheon. A musical and literary program was given.

Miss Edith Hindman, of the faculty of the School of Pharmacy of the University of Washington, is recovering from a recent attack of appendicitis. Miss Hindman was the 1914 winner of the $10 gold prize offered annually by the W. O. N. A. R. D. for the woman student in pharmacy ranking the highest in the United States.

At the eighth annual meeting of Louisville Chapter, No. 11, held on May 13th ,the following officers were elected for the ensuing year: President, Mrs. S. E. May; first vice-president, Mrs. John J. Seiberz; second vice-president, Mrs. Geo. Boeckman; secretary, Mrs. H. Cohn; treasurer, Miss Louise Stauber. Board of managers: Mrs. J. C. Weinedel, chairman, Mrs. J. J. Seiberz, Miss Clara Hulskamp; executive board for 1917-1918: Miss Emma C. Frick, Mrs. S. E. May, Mrs. Fred Kranz, Miss Eleanor Diehl, Mrs. Henry Cohn, Mrs. J. C. Weinedel, Mrs. John J. Sieberz, Miss Clara Hulskamp, Mrs. K. O. Spelger, Mrs. Peter Schlosser, Mrs. John G. Krul, Mrs. William Fisher, Mrs. George C. Boekman, Mrs. William Tafel.

Miss Frick, the retiring president, was presented with a magnificent bouquet of roses, and War Lunch was served under the chairmanship of Miss Henrietta Baass.

The Milwaukee Druggist Ladies' Club elected the following officers at the annual meeting on May 15th: President, Mrs. W. E. Porter; vice-president, Mrs. Edward Jones; second vice-president, Mrs. Ottmen Beeck; recording secretary, Mrs. George Haertlein; corresponding secretary, Mrs. George H. Keston; treasurer, Mrs. Theodore Bakke. The Club voted to buy a $100 Liberty Bond and to contribute $25 to the Red Cross.

Mrs. Lyman W. Griffin, who was one of the charter members of Chapter 1, W. O. N. A. R. D., was quite seriously injured in a trolley accident in Cambridge. She suffered a broken arm, many bruises and nervous shock.

Miss Lum Shipe of San Marcos, Texas, was elected historian for life, at the Texas Pharmaceutical Association meeting, held at Waco in May. On the second evening of the meeting, the Ladies Auxiliary of the association gave a reception and dance in the ball room of the Raleigh Hotel.

VISIT STEARNS' LABORATORIES

Following a custom inaugurated more than twenty-five years ago, the pharmacy classes of the University of Michigan journeyed to Detroit by special car recently and were taken through the laboratories of Frederick Stearns & Company. This trip has been incorporated in the pharmacy curriculum, and according to Dean A. B. Stevens of the College of Pharmacy, has always proved exceedingly instructive and entertaining.

The students were accompanied by their instructors and were taken through the laboratories in small groups of about ten each. The trip through took between two and three hours, after which an informal reception was held in Memorial Hall. Later a banquet was served in the Recreation Room. The University of Michigan colors, the maize and blue were carried out even to the gift packages of Day Dream Toilet Requisites which were presented. Dr. Henry Kraemer, professor of pharmacognosy paid a striking tribute to Willard Ohliger, vice-president and general manager of the company, to whom he gave enthusiastic praise for his whole-hearted and highly efficient co-operation with the government in the obtaining and distribution of medicinal supplies for the army. The banquet was informal and interspersed with a musical program and three minute speeches.

Dean Stevens stated that the inspectors as well as the students look forward with a great deal of pleasure to trips of this character deriving therefrom not only much interest in studying the varied manufacture of drugs and medicinal preparations, but also gaining knowledge of manufacturing which proves of real value to them not only in their classes but afterwards, when they take up their life work. Following the banquet, the party was taken to a local theatre and then took the special car back to Ann Arbor.

TRADE COMMISSION ON RESALE PRICES

The Federal Trade Commission has recently issued a ruling prohibiting the establishment of "Resale Prices" on articles of merchandise.

This ruling prohibits the following:

(a) Indicating to dealers the prices at which goods shall be resold.

(b) Securing agreements from dealers to adhere to such prices.

(c) Refusing to sell to dealers who fail to adhere to such prices.

(d) Refusing to sell to dealers, who fail to adhere to such prices, upon the same terms as dealers who do so adhere.

(e) Furnishing any advantage to dealers who adhere to the resale prices, while refusing similar treatment to dealers who do not adhere to the prices.

We are informed that the following customary practices throughout the drug trade would not be prohibited by this ruling:

1. The printing of the retail price to consumers on wrappers and packages.

2. The placing of cards in boxes indicating the retail price of the contents to the consumer, such as price per pound cards, cards indicating the number of articles to be sold for certain prices, etc.

However, care should be taken not to put in packages any notices advising the retailers as to their resale price of goods.

3. The establishment of a fixed list price to wholesalers and retailers, allowing a fixed and uniform discount to said wholesalers and retailers.

4. Efforts, on the part of salesmen or through House Organs or other methods of publicity, toward educating the retailer as to the value of goods or prices at which it is necessary for him to sell his goods in order to make a legitimate profit over expenses.

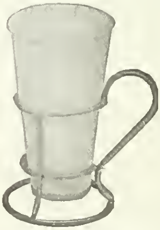
5. Furnishing samples to customers and marking same with retail prices.

6. Issuing circulars showing wholesalers' prices to retailers, and wholesalers' profit, also prices of retailer to consumer and retailer's profit.

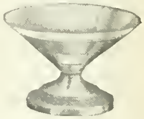
Charles E. Dodd, Pacific Coast representative of the Powers-Weightman-Rosengarten Company, who early in 1917 accepted a commission as major of the 361st Infantry, has received his honorable discharge from the army on account of ill health caused by an injury while in the discharge of his duty. Mr. Dodd will return to his old position and is expected to resume his duties as representative of the company on the coast at an early date.

Students and faculty of the St. Louis College of Pharmacy recently held dedication ceremonies and raised a service flag of 140 stars. The meeting was held in the college auditorium.

SOME MIX-UP

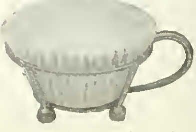


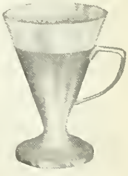
In the May issue of *The Pharmaceutical Era* was published an advertisement of the Vortex Mfg. Co. of Chicago in which were used by mistake the illustrations of paper soda and sundae cups made by the Strathmore Co. of Providence, R. I.



In order to set the matter straight before our readers we are herewith re-producing the cuts of both of these advertisers. The two cuts on the right illustrate the cone shape goods made by the Vortex Co.; and the two on the left illustrate the flat bottom goods made by the Strathmore Co.

From this explanation, we trust that such of our readers as were misled by the wrong cuts will now understand that the Vortex Co. makes only the cone shape products, and for the flat shape soda and sundae dishes we would refer them to the Strathmore Co.





Credit and Commercial Case Decisions

By **GEORGE H. MURDOCH**, New York, N. Y.

Chinese as Citizens—Children born in the United States of Chinese parents domiciled therein are citizens.—246 F. (U. S.) 110.

Obligation to Support Wife—That a man and his wife are always quarreling does not relieve him of his obligation to support her.—102 A. (N. J.) 400.

Surrounding Circumstances as Explaining Contract—A contract should be construed in the light of the circumstances existing at the time it was made.—165 N. W. (Mich.) 722.

Forfeiture of Life Insurance—That the insured does a prohibited thing does not absolve the insurer, unless some causative connection between the acts and the death of the assured be shown.—165 N. W. (Iowa) 584.

Altered Note—Where a note was altered by a stranger without the knowledge or consent of any of the parties thereto, recovery could be had upon it in its original condition, although altered before delivery.—169 P. (Wash.) 324.

Employment Contract—Where a contract of employment is one at will only at a stipulated rate per month, the employee, having been dismissed in the middle of the month, is entitled to compensation only up to the time of dismissal.—167 N. Y. S., 1025.

Purchases by Trustee—Where a business is transferred to one in trust, with agreement to purchase goods and to keep the business going and pay off creditors, the trustee has power to purchase goods and bind the trust estate therefor.—169 P. (Ore.), 102.

Object of Fire Insurance Contract—The object of a fire insurance contract is to afford indemnity, and forfeiture stipulations and conditions in the policy will be construed, if possible, so as to avoid forfeiture and afford indemnity.—165 N. W. (N. D.), 545.

Bulk Sales Law—In order to constitute a fraudulent sale under the bulk sales law, it must appear that a material portion of the stock was sold in bulk out of the ordinary course of trade and contrary to the regular prosecution of the business of the seller.—199 S. W. (Ark.), 96.

Custom and Usage as to Meaning of Words—The ordinary meaning of words used in a business cannot be changed, except by proof of general usage by those engaged in the particular trade, or by proof that the parties to a contract used it in the special sense contended for.—169 P. (Cal.), 231.

Reasonable Care in Delivering Telegram—A telegraph company must use reasonable care and diligence in its efforts to promptly deliver a message; "reasonable care" being that care which an ordinary reasonable man would take under the particular circumstances of the case.—165 N. W. (Mich.), 707.

Due Process of Law—"Due process of law" and the "law of the land" are synonymous, and mean that no citizen shall be deprived of his life, liberty, or property without reasonable notice and opportunity to be heard according to the regular and established rules of practice and procedure.—199 S. W. (Ky.), 8.

Notice of Damage to Goods in Carriage—A stipulation as to notice of a claim for injury to goods while being transported by a common carrier should be given a reasonable construction, and a substantial compliance therewith is all that is required, in view of the object of the requirement of the notice.—169 P. (Ore.), 114.

Sunday Closing—Druggists—The word "druggists," within Code 1907, Section 7814, prohibiting "any person who, being a merchant or storekeeper, druggists excepted," from keeping open store on Sunday, refers to the occupation and not the person, and a druggist cannot sell anything but drugs on that day.—77 So. (Ala.), 52.

Monopolies—In a retailer's purchasing contract with a wholesaler of medical and other goods, a provision that he sell goods so purchased at retail prices to be fixed by the wholesaler is void as tending to place a burden upon the alienation of property not necessary for the protection of the parties.—77 So. (Ala.), 70.

Knowledge of Agent is Knowledge of Principal—Knowledge of an agent is knowledge of a principal, therefore, where plaintiff's husband, her agent and the active partner in the business, knew that the consideration for a note which she received as collateral security for a loan made to the business was illegal, plaintiff is not a bona fide holder of the note.—165 N. W. (Mich.), 855.

Value of Building in Fire Insurance Adjustment—To arrive at the value of a building for the purpose of finding damages by fire where the building has no market value, the cost, uses it has been put to, age, condition, and location should be considered; and the price at which an owner contracted to sell it, while competent, is not controlling.—165 N. W. (Mich.), 705.

Chattel Mortgage on After-Acquired Property—A corporate mortgage not only covering chattels and book accounts then owned by the mortgagor, but also after-acquired chattels and book accounts that should be substituted in the regular course of business for those existing at the date of the mortgage, was a valid lien on book accounts arising and chattels acquired after the date of the mortgage.—102 A. (N. J.), 448.

"General" and "Special" Deposits—Where a person who is indebted to a bank leaves with it, as security, notes belonging to him, and authorizes it to collect upon them and apply a portion of the proceeds to the payment of his debt, and instructs it to not deposit the balance, but to deliver it to a third person, and the cashier, contrary to such instruction, deposits the balance in the bank, such balance is not a "general" but a "special deposit" or "trust fund."—169 P. (Ida.), 180.

Corporation Assets as Trust Fund—Although an insolvent corporation may as a general rule prefer certain of its creditors, the assets of a corporation are nevertheless a trust fund for the payment of its debts to the extent that the creditors have a lien upon them which is prior in point of right to any claim which the stockholders or directors as such can have, and the courts should be astute to defeat any scheme or device which is calculated to withdraw this fund or in any way to place it beyond the reach of creditors.—165 N. W. (N.D.) 558.

Obituaries

PROFESSOR JOHN HARPER LONG

Prof. John Harper Long, dean of the Northwestern University School of Pharmacy from 1913 to the time of its consolidation with the School of Pharmacy of the University of Illinois last year and professor of chemistry in the Medical School of Northwestern University in 1881, died at his home in Evanston, Ill., on June 15. He was born near Steubenville, Ohio, in 1856, and after graduating from the University of Kansas, studied in the University at Tubingen, Germany.

Prof. Long was widely known as a scientist throughout the country, serving as a member of the referee board of experts of the United States Department of Agriculture, and giving valuable service as a chemist of the Illinois State Board of Health and of the Sanitary Drainage Canal Commission. In 1917 he was president of the Institute of Medicine of Chicago. He was the author of a number of text-books of chemistry, one of which prepared in collaboration with the late Professor Oldberg, ran through more than one edition and was well-known to pharmacists and students. His widow and four sons, Albert, Esmond, Lothar, a captain of Marines in France and Byron, a lieutenant in the U. S. Army, as also, one daughter, Mrs. E. P. Miller of Washington, D. C., survive.

ISAAC EARL DANTZLER

Isaac Earl Dantzler, engaged in the drug business with his father, Dr. M. J. D. Dantzler, Elloree, S. C., for the past twelve years, died some weeks ago at Asheville, N. C. after an illness of several months. He was 28 years of age and a graduate of the Atlanta College of Pharmacy in 1909. He was a member of the Methodist Church and was held in the highest esteem by the people of his section of the State as a helpful neighbor and an honorable citizen. He is survived by his aged father and mother, five sisters and two brothers.

SCHOLARSHIP EXAMINATION POSTPONED

Chairman E. C. Christensen, 4149 Vincennes St., Chicago, of the Committee of Examination, has sent out a notice to members of schools and boards of pharmacy and the pharmaceutical publications, informing them of the postponement of the examination for the Fairchild scholarship scheduled to be held on June 25. In order to establish a plan of award for the scholarship in line with recommendations which should receive further consideration, a postponement has been deemed necessary, Mr. Christensen states, and a decision will be withheld until the A. Ph. A. convention in Chicago when the Committee will hold a meeting. At latest, announcement will be made on Sept. 1, and the scholarship awarded by Oct. 1, 1918.

The plan under consideration by the Committee is in line with a recommendation made by President R. A. Lyman in his address at the last annual meeting of the American Conference of Pharmaceutical Faculties in which he stated that it was the sense of the Conference that Mr. Fairchild could render the greatest service to pharmacy by offering the scholarship to a graduate pharmacy student, in order that the student might pursue some research problem for one full school year in the school of his choice, and that this scholarship should be awarded on the basis of the applicant's scholastic training, his standing as an undergraduate, and upon his fitness for research.

E. G. Eberle, chairman of the Fairchild Scholarship Committee, suggests that it would be advisable for each school to decide on an eligible candidate for the scholarship, and that a record should be kept of the preliminary education possessed by the prospective candidate, of his pharmaceutical training and education, and of his ability to do research work. The suggestion has also been made, but not agreed upon, that each school in the Conference should propose one candidate, and that the respective deans furnish the Fairchild Scholarship Examination Committee with data which will form the basis of the committee's decision. Mr. Eberle states that the plan does not contemplate any other examination and the award will be made in time for the next school term.

HALIFAX FUND

Editor, THE PHARMACEUTICAL ERA:

On June 10th I received from Mr. Ramsay, treasurer of the New York and New England Committee for the Relief of the Halifax Druggists, a check for $2,627.75, with vouchers from the bank attached, being the entire amount of funds, with interest, collected by this Committee. This check I forwarded the same day to Mr. T. A. Miles, Halifax Manager of the National Drug and Chemical Co., to distribute according to the best judgment of the local committee among the druggists of Halifax.

Our check, with the amount collected by the ERA makes the total a little less than $5,000, and, as I wrote Mr. Miles, this sum is far less than we anticipated, but owing to the delays and the countless appeals being made to American druggists every day, we feel that we have done fairly well. The Halifax druggists may be sure of the friendly spirit which prompted the Committee in this undertaking, in which work we were most generously assisted by the ERA in the same fine spirit of professional co-operation.

N. F. REINER, Chairman.

Providence, R. I., June 15, 1918.

C. C. S. Ramsay, president of the Connecticut Pharmaceutical Association, New Britain, Conn., and treasurer of the New York and New England Committee organized by the presidents of the New York and New England Pharmaceutical Associations to solicit funds for the relief of druggists who suffered losses in the Halifax disaster last December, sends the ERA a letter under date of June 8th in which he states that he has received a contribution of $10 from Plimpton-Cowan Co., Inc., Buffalo, N. Y., which he has forwarded to Halifax, and that the fund is now closed. The total amount received by the Committee from the beginning of its work immediately following the disaster at Halifax to the closing of the fund on June 8 is $4,765.75. The names of all contributors and the amounts donated have appeared in previous issues of the ERA. Recapitulation:

Amount previous acknowledged	$4,755.75
Plimpton-Cowan Co., Inc., Buffalo	10.00
Total acknowledged to date	$4,765.75

WHOLESALE DRUGGISTS CONVENTION

The forty-fourth annual meeting of the National Wholesale Druggists Association will be held during the week of October 7, at the Hotel Astor, New York, in accordance with action taken by the Committee on Arrangements and Entertainment. Full details concerning hotel rates and accommodations will shortly be given in a circular letter to be sent out by this Committee, of which Clarence G. Stone, 192 Front Street, New York, is chairman. Progress is being made on the general plans of entertainment. Frank M. Bell, Chicago, Ill., chairman of the Committee on Rates and Routes, is arranging for the transportation of members and guests.

Boards of Pharmacy

LOUISIANA

The Louisiana Board of Pharmacy announces the names of the following applicants who successfully passed the second quarterly examination held recently:

Registered Pharmacists: Wilford George Combel, Andrew Henry Landry, Charles D. Smith, all of New Orleans; Andrew C. Delaune, Thibodaux; Felix C. Mestayer, Eunice; Miss A. Marie Rateau, San Antonio, Texas; Mrs. Carryebell Coyle, Spring Hill, La.; and two from Cuba, Jose Barreda y Columbie and Ramon Planas Montoya.

Qualified Assistant Pharmacists: Clegg Louis Gremillion, Marksville, La.; Stanley J. Theriot, Covington, La.; Louis E. Commagere, Tiburce R. Lee, Mrs. Jeanne Scully Roeling, Eugene Vaz, Jr., Edwin A. Russell, Anthony S. Cocchiara, Hyman Karnofsky, Philip Frank Monte, Miss Marie Greer McComiskey, August Joseph Wagner, all of New Orleans.

Registered Apprentices: Miss Wilhelmina Voelcker, Shreveport, La.; Charles H. Tanner, Cheneyville, La.; Mrs. Laura McArthur, Bogalusa, La.; Lee Israel, Ville Platte, La.; E. N. Camp, Monroe, La.; J. L. Carpenter, Jr., Denham Springs, La.; Patrick C. Hogan, Thibodaux, La.; Fred A. Di Trapani, Mrs. Catherine C. Otto, Mrs. Walter M. Schaff, Miss Isabelle De Lanzac, John Hurley, Joseph A. Gunckel, Mark Anthony Barre, Joseph Barrois, Horace Duffy Truxillo, Harold Calvin Lear and John W. Conravey, all of New Orleans.

Duplicate certificates were issued to Wilson J. Bebert, Whitecastle; J. Sidney Gary, New Iberia; Harry M. Lane, Vinton, La.; Charles A. McDonald, Baton Rouge, La.

ILLINOIS

At the April examination conducted by the Illinois State Department of Registration and Education for assistant pharmacists and registered pharmacists, the following were successful:

Registered Pharmacists—Wm. F. R. Adams; Harry D. Bate; L. E. Baxa; Emil Blahnik; A. J. Block; A. B. Brooks; Fay W. Brown; Vincenzo Calabrese; Ralph E. Campbell; Vincent Coco; Wm. D. DuBroff; Otto G. R. Ende; Geo. B. Fedderson; Floyd D. Godfrey; Arthur G. Grosse; Morris Harvey; Calvin W. Hesse; Wm. H. Huff; Rudolph J. Klaff; Wm. Levinson; John H. Lindahl; Wm. F. Lohman; J. R. Mahaffy; Alex C. Mayerson; Chas. A. Michalak; W. V. Muszynski; Louis Nochomowitz; A. K. Northrop; James B. Olson; Herman Rotzky; J. L. Rosenblum; Jacob C. Sakofsky; Leo H. Sarnatzky; Thos. A. Shields; Harold A. Shindle; Sam Simon; Wm. C. Spanier; Walter W. Stafford; Raymond L. Thompson; Louis Weprin; Max A. Zeitkin, all of Chicago and Frederic A. Bengston, Rock Island; L. W. Callahan, El Paso; Eugene A. Krebe, Glencoe; Wm. J. Luthringer, Petersburg; Armin R. Wyle, Waverly.

Assistant Pharmacists: Jasper Annunzista; Jacob Bearsh; Louis P. Brockhoff; Barney Barback Samuel G. Cohn; Wm. DuBroff; A. J. Dziopek; Gordon F. Ericson; Harold I. Erly; Edw. J. Forbrich; Morris W. Gordon; John M. Gilcrist; Isaac Greenberg; Isadore H. Gross; Warren H. Martin; Lawrence Menconi; Leo Mesirow; Leo H. Milles; David Muskovitz; Armin P. Maag; Frank A. McGinnity; Geo. T. Neuzil; Albert Park; Albert W. Ricker; Isadore Robbins; Geo. A. Simpson; Gus Silverberg; Aaron Vidibor, all of Chicago; and Paul B. Harrison, Cuba; Julius C. Laegeler, Highwood; W. F. McRoberts, Springfield; Leon A. Rambo, Lamoille; Maurice B. Skelton, Urbana; John Stockbar, Lemont.

Local Registered Pharmacists: Elmer G. Joseph, Freeburg; John L. Morrow, Genesco; A. H. Denig, Elmhurst.

KANSAS

The Kansas Board of Pharmacy announces the following list of applicants who successfully passed the examination of the board held in Kansas City, Kans., on May 16 and 17: Ellen Davison, Mulberry; S. R. Evans, Muscotah; George F. Miller, Paola; Mrs. N. L. Little, Alta Vista; Clarence Bower, Norton; Claude McReynolds, Beattie; Dean A. Jesson, Caney; Lewis I. Tindall, Hoisington; Sam R. Evans, Kansas City, Mo.; Earnest S. Lehmann, Hutchinson; W. C. Warner, Carbondale; Winifred Clute, Mineola; Jess S. Zinc and Harry Sagand, both of Kansas City, Kansas.

The next examination will be held at Wichita on August 7 and 8. The officers of the board for the present year are: President, J. G. Bunch, Beloit; treasurer, R. B. Bird, Winfield; secretary, Edward Dorsey, Ottawa. The other members are F. W. Ekstrand, Salina, and Mathias Noll, Atchison.

NEW JERSEY

The New Jersey Board of Pharmacy has granted registration to the following applicants who successfully passed the examination in April:

Registered Pharmacists—Morris A. Aarons, Atlantic City; Edward Harnisch Adolph, New York, N. Y.; Anthony Ambrose, Newark; Raffaele Anzano, Union Hill, Michael Auerbach, Philadelphia, Pa.; George W. Auffinger, Weehawken; John A. Bingham, Paterson; Albert Bliwise, Harrison; Garrie E. Bostwick, Newfield; Roscoe Owen Brady, Ambler, Pa.; Joseph George Concialdi, Jr., Rockaway; Kenneth Edwin Cooper, Keyport; Vincent Copello, New York, N. Y.; James W. Craig, Philadelphia, Pa.; Maurice DeBari, Hoboken; Ernest Gilmore Dutcher, Newark; Samuel Finkel, New York; Louis Gelwarg, Brooklyn; Jacob Glausser, Philadelphia; Samuel J. Goldberg, Camden; Samuel M. Goodman, Newark; Joseph Greenberg, New York, N. Y.; Warren R. Guest, Woodstown; George Hans Hansen, New Brunswick; Thomas Ilaria, Newark; John William King, Jr., Jersey City; Isadore Kravitz, Newark; Charles Levenson, Trenton; Benj. Alex. Levinson, Bronx, N. Y.; Aaron Levy, New York, N. Y.; Brainard Link, Vineland; William H. Luckey, New York N. Y.; Max Lurie, Bronx, N. Y.; John Franklin Maile, Jenkintown, Pa.; George Margulis, Bronx N. Y.; Frank Marinaro, New York, N. Y.; Philip Mendelsohn, Newark; Israel Merkin, Philadelphia, Pa.; Edward Steck Miller, Weehawken; Dr. Howard Miller, Glen Rock; William Torrey Morris, 2d, Glenridge; Michael J. Parvin, Nutley; Frank Della Peruta, Paterson; Samuel Raphael Price, Philadelphia, Pa.; Nathaniel H. Rappaport, Philadelphia, Pa.; Walter C. Reed, Sea Bright; Mrs. Anna Mabel Reibel, Elizabeth; Abraham S. Rosenthal, East Orange; Bernard Rosenzweig, New York, N. Y.; Hugh H. Ross, Vineland; Isidor Rowitz, Newark; Meyer Satz, Newark; Mrs. Audrey Brown Schilke, Englewood; Jack Shack, Trenton; Charles Sinclair Shirley, Frankford; Joseph C. Silk, Perth Ambo Ruth Everest Sparks, Burlington; Theo Burr the

Sparks, Atlantic City; Jacob Sugarman, New York, N. Y.; Leon Francois Tuite, Jersey City; Fred W. Warnke, Westfield; Esther Weinberg, Philadelphia, Pa.; Lazarus Weinstein, New York, N. Y.; Eward Louis Weiss, Philadelphia, Pa.; Edwin C. Wilson, Trenton; Alfred Wunner, West Hoboken; George C. Rohn, Newark.

Assistant Pharmacists—Saul Busch, Newark; John C. D'Arienzo, Paterson; Henry L. Friedman, Newark; John Gadjo, Passaic; David M. Galpen, Newark; Joseph Goldman, Newark, Maurice Greenberg, Jersey City; Edmund Y. Gunsche, Mt. Holly; Paul Hawrylow, Jersey City; Isidore Kravitz, Newark; Louis Leon Lerner, Newark; Anthony L. Montelli, Jersey City; Clifford L. Morrell, Keyport; Herman H. Nusbaum, Newark; Leon F. Printz Atlantic City; Philip B. Pritsch, Newark; Dr. Gerald A. Richardson, Jersey City; Abraham N. Shavelson, West New York; Charles S. Shirley, Frankford, Pa.; Raymond A. Smith, Belleville; George Mathew Thumm, Bronx, N. Y.; Herman C. Vernick, Newark.

At the annual meetng of the Board of Pharmacy of New Jersey, held on June 6 at the State House, Trenton, N. J., the following officers were elected for the forthcoming year: President, George M. Beringer, Jr., of Camden; vice-president, Ferdinand A. Bongartz, of Jersey City; secretary, Edgar R. Sparks, of Burlington; and treasurer, William H. McNeill, of Passaic.

MAILING OF LIQUIDS AND SALVES

Washington, advices say that the Post Office Department has adopted new regulations concerning the transmission through the mails of liquids and salves, which provide that admissible liquids and oils in packages not exceeding the limit of weight of fourth-class matter may be accepted for mailing when intended for delivery at the office of mailing or on a rural route starting therefrom when inclosed in securely closed containers, provided it is not necessary to transport them over steam or electric railways.

Admissible liquids and oils, pastes, salves or other articles easily liquifiable may be accepted for mailing, regardless of distance, when they conform to the following conditions:

"When in strong glass bottles holding four ounces or less, the total quantity sent in one parcel shall not exceed 24 ounces, liquid measure. Each bottle shall be wrapped in paper or other absorbent substance and then packed in a box made of cardboard or other suitable material and packed in container made of double-faced corrugated pasteboard of good quality. The corners of the container must fit tightly and be reinforced with tape so as to prevent the escape of any liquid if the contents should be broken, and the whole parcel shall be securely wrapped with strong paper and tied with twine. Single bottles of liquid holding four ounces or less may also be packed as prescribed in the following paragraphs:

"When in glass bottles holding more than four and less than sixteen ounces, the bottle must be very strong and must be inclosed in a block or tube of metal, wood, or papier-mache or similar material; and there must be provided between the bottle and the block or tube a cushion of cotton, felt, or other absorbent. The block or tube, if of wood or papier-mache, must be at least one-eighth of an inch thick for bottles holding eight ounces or less, and at least three-sixteenths of an inch thick for bottles holding more than eight ounces. The block or tube must be rendered watertight by an application on the inside of paraffin or other suitable substance and must be closed by a screw-top cover h sufficient screw threads to require at least one and one-half complete turns before it will come off. The cover must be provided with a washer, so that no liquid could escape if the bottle should be broken. Such bottles may also be packed in strong and light receptacles of wood, metal, or waterproof corrugated pasteboard if surrounded with bran, sawdust or other absorbent material in sufficient quantity to absorb all the liquid if the bottle should be broken.

"Mailable liquids, in quantities of more than sixteen ounces, when in securely sealed glass bottles shall be accepted for mailing when packed in strong boxes and surrounded with sawdust or other suitable substance to protect the contents from breakage. All such packages must be marked 'Fragile—This Side Up,' or with similar inscription."

NEW CANADIAN PROPRIETARY LAW

The Ontario License Board, a body charged with the duty of carrying out the provisions of the Ontario Temperance Act is taking steps to prevent the sale of patent medicines carrying a large proportion of alcohol. It was formerly difficult to interfere with these medicines owing to the large percentage of medication in them. Under recent legislation, however, the License Board may submit samples to the Provincial Board of Health which, if it considers that medication is not sufficient to prevent its being drunk for the alcohol contained may issue a certificate forbidding its sale. A further provision decrees that the Board may make it an offence to sell a patent medicine which owing to the alcohol it contains would be liable to be taken in quantities injurious to the health. Practically all the well known patent medicines in which alcohol is largely used will be submitted to the Board of Health for analysis.

ENGLAND'S DEMAND FOR DRUGS

Great Britain has under consideration a plan for a Special Industries Board to foster and promote the growth of industries manufacturing supplies indispensable to important British activities which before the war were supplied mainly from present enemy sources or from sources under present enemy control; according to a recent issue of the London *Chemist & Druggist*. The following is a list of drugs and chemicals formerly procured as above, and the normal consumption of same in the United Kingdom; bromine, 100 tons; iodine, 70 tons; mercury, 75 tons; bismuth, 80 tons; belladonna, 50 tons leaves; and 100 tons of roots. These figures are all pre-war estimates and most of these products have been increased by 300 per cent. or more since 1914.

In addition to this list is another giving drugs and chemicals which it would be desirable to procure entirely from within the limits of the Empire, but the quantities which are normally used are not given: Potassium, henbane, foxglove, colchicum, cinchona, quinine, ipecacuanha, coca leaves, opium, salicylic acid, acetyl-salicylic acid, salicylate of sodium, salvarsan, neo-salvarsan, novocaine, phenacetin, phenazone, eucaine, liquid paraffin and thymol.

SHIPPING QUININE IN CRUDE FORM

It is reported that the Vereeniging van belanghebbenden by de kinacultuur recently requested manufacturers and producers of quinine to modify contracts so as to permit the product to be sent either as bark or in the crude form. The Nederlandishe Kininefabriek and the Amsterdamsche Kininefabriek, both in Holland, and the Bandoengsche Kininefabriek, in Java, have agreed to allow planters to send it in crude form.

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ESTABLISHED 1887

THE PHARMACEUTICAL ERA

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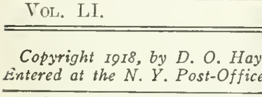

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Alien Enemy Chemicals

Several State Pharmaceutical Associations, at recent conventions, have passed resolutions, refusing to handle chemicals made or controlled by enemy firms, and there is a growing sentiment among pharmacists against these goods. The taking over of German-controlled concerns by the Federal Custodian of Alien Enemy Property received wide publicity. The general public is aroused, and it is inevitable that druggists, with their more intimate knowledge of the inside facts, should take an advanced stand on this subject.

There are three classes of enemy alien chemicals; First, goods manufactured in Germany and sold here by agents. These do not count now, for stocks on hand here have long since been depleted. Second, goods owned and controlled by Germans, but manufactured in the United States. This class is numerous, and it is but natural that the manufacturers should camouflage their enemy origin by turning "Made in America" into a slogan of desirable publicity for them. As a matter of fact, these goods have been made in America primarily to avoid paying the American tariff and the more profitably to exploit American patents, which, granting exclusive rights both on the substance itself and its method of manufacture, have afforded these alien patent holders more protection than they can secure in their own country. Third, goods manufactured in America, sometimes by American concerns, under a license from Germans who are the real owners of the patent and trade-mark rights. In such cases, a rental fee or royalty is being paid to the German proprietors, although a percentage of the profits comes to the American agents.

All three of these lines of production come within the jurisdiction of the Custodian of Enemy Alien Property, and goods belonging to any one of these classes when sold by a druggist, would bring profit to Germans. It should also be remembered that even when the Government takes over an enemy controlled concern, the business is run in trust and, after the war, there will be an accounting and settlement with the foreign proprietors. Therefore, even the taking over of a company by Mr. Palmer and his aides, may not stop the indirect profit going eventually to the enemy.

Druggists should get these points clearly in mind, for with them rests the issue of selling any product which will yield profit to alien enemies. German chemical houses have for many years exploited Americans to the limit. They have taken unfair advantages of our patent laws by charging us two, three, or many times the prices they charged for their products in other countries. Now that we are at war with Germany, there can be no excuse for any loyal citizen helping Germany to make bullets or gas for killing American soldiers, for that is exactly what every druggist will be doing who sells goods which yield a money profit to German citizens.

Patriotic Resolutions of Pharmacists

Evidence of the patriotic sentiments of members of the drug trade is exhibited in the numerous resolutions that have been adopted by various State pharmaceutical associations during the present year. At the recent meeting of the Washington State Pharmaceutical Association the members went on record as favoring the utilizing of American resources and products and resolving to do everything possible to discourage the use of German-made goods by either doctors or the public. In Nebraska, the druggists were equally alive to the problems of the present, and although the resolutions were somewhat differently worded, they carried an expression of patriotism lofty in its conception and encouraging to every lover of our great country and the righteous cause in which it is engaged.

Pharmacists in the past, as a class, have never, perhaps, taken a leading part in attempting to formulate the policies of the State and Nation, for unless they were called upon to combat legislation specifically aimed at their calling or to defend their rights as pharmacists, they have been only too willing to let others do the general work and have followed in the paths of least resistance. It has at times seemed to the disinterested observer as though some druggists did not yet fully realize or had really forgotten that their future was inseparably connected with the destiny of the country at large, and that the basic principles of a government by the people called for the intensive effort and unreserved support of every citizen who had the welfare of his country at heart. The average druggist, if we read the signs aright, is awakening to the great fact that individual genius and ability can only attain the highest flights in surroundings conducive to freedom and action, and such conditions, at least in this country, must be shaped and directed by the sentiments of the citizenship responsible for the Government under which it lives.

The resolutions adopted by pharmaceutical organizations this year collectively show a breadth of view that betokens an awakening of the entire drug trade of the country. If resolutions mean anything, they show that the average druggist has caught the step in the great forward march of the Nation, that he now more fully realizes that his country's success means his success, and that if the country is to enjoy material prosperity the chances are that he will be a sharer in the greater opportunities that will thereby come to each citizen. Could a more patriotic or binding pledge foreshadow the future success of the nation than that expressed in the following resolution adopted by the Nebraska Pharmaceutical Association?

"We pledge all our resources, mentally, bodily and financially to the service of our Government to the hour of victory."

The Problem of Clerk Shortage

In the discussion that has developed as the result of the scarcity of drug clerks throughout the country occasioned by the call to the colors, there have been presented many opinions and reports on local conditions, but up to this time no plan has been presented which promises immediate relief from the hardships of the situation. In some quarters there seems to be a tendency to believe that the drug business of the future will not continue entirely upon the line it has followed in the past. Heretofore the average pharmacy has been largely a combination of the purely pharmaceutical side of the business and a side which dealt with various lines of goods of a miscellaneous character, frequently having no connection with drugs whatever, and which could be sold by the average clerk having no technical training whatsoever. In many communities such combinations of mercantile enterprise have been a real benefit to the neighborhoods where they were established, for owing to the diversified lines of goods carried, such stores gave the people an opportunity to purchase such drugs and medicines as they might want, which in the absence of a real pharmacy they might not have been able to purchase at all.

This situation is not uncommon, but to one who has studied the present trend or realignment, there seems to be coming a division of the old department store methods and stocks of the drug store into pharmacies which shall be dominated by professional and registered pharmacists, and stores which shall handle goods of a commercial character only. As the economist sees the situation, there is no need at the present time for an increased number of drug stores, or of those who elect to carry on the purely commercial activities of multitudinous lines which can be sold by anyone.

The war more than anything else has caused many druggists to consider the pharmaceutical outlook from a different viewpoint than they have taken in the past. Many of them now doubtless realize for the first time that they must exercise a selective discretion in choosing their apprentices. Educational attainments will be more to the forefront than they have ever been before, and one who has studied the problem well is clearly within the bounds of judgment and experience when he advises druggists to "try to hire only young people who have had at least two years of high school credits, not the kind that have merely been 'exposed' to high school. Select the ones that have 'taken' education. Perhaps before the war ends they will be licensed; the other kind never will."

Opium Troubles and Problems in China

Revenues Enormous and Traffic Productive of Smuggling

PRESS despatches of the past few months indicate that a revival of the opium traffic in China is probable, and that officials of the Government have formed a syndicate to handle the drug under the guise of an anti-opium society which will sell to addicts who are under treatment. As stated in these despatches, the Chinese Government has arranged to purchase the remaining stocks of Indian opium for $15,000,000, and payment is to be made in Government bonds redeemable in ten years. The opium will be resold to the syndicate, it is stated, an agreement having been signed at Shanghai by which the Government obtains the opium at 6,200 taels (tael = $1.18) per chest and sells to the syndicate at 8,000 taels per chest. The sale to the public by the syndicate will be at a price that will yield enormous profits, permitting, it is said, high officials to share in the gains.

This information, and there seems to be no great reason to doubt its truthfulness, opens the way for another chapter in the history of a drug which has at once eased the pain of the sufferer, and enslaved millions of habitues. That many will look upon the scheme to remove the ban from the exploitation of this pernicious drug in China as a backward step, is certain, for most of the civilized countries, including our own, have gone on record by enactment of laws which aim to completely control the traffic in all narcotics, of which opium and its derivatives are the chief representatives.

Interior of an opium smoking room in China. Note the reclining attitude of the smoker and how he presses his lips against the flat end of the tube of pipe.

The present movement in China casts a shadow over the results that were hoped would follow the work of the several international conventions that have been held at various times to control the opium traffic. The agitation against this traffic has been continued for years, especially by English philanthropists, and more particularly by the Anti-Opium League, which was organized by Lord Shaftesbury, in 1873. In 1893 an English Commission was empowered by a resolution of the House of Commons to take evidence in the United Kingdom and in the Indian dominions, and to make inquiry into the economical, commercial and social aspects of the cultivation of the poppy, and with which was connected the sale of opium to the Chinese. In 1906, as a result of the recommendations of the returned commissioners from China, an edict was issued by the Chinese Government ordering the abolition of the use of opium, both foreign and native, in China, within a period of ten years. The present information seems to indicate a return to conditions which permit the extension of the use of opium, rather than an attempt to control or restrict its distribution.

The story of the opium trade in China, of the development of the "smoking habit" among the Chinese, and the dangerous course the Chinese Government was led to adopt in sanctioning the cultivation of opium in order to wipe out the curse, furnishes a curious commentary on those who are callously indifferent to the mental, moral, physical and financial welfare of millions of people. As far back as the beginning of the 18th century the Chinese Government desired to rid the country of the curse of opium, the use of which had been steadily growing among the inhabitants. Before 1767 the import of opium had rarely exceeded 200 chests, but in that year it amounted to 1,000. By 1800 it had increased so alarmingly that an imperial edict was issued prohibiting the importation and threatening all Chinese who used it with condign punishment.

The Bund at Shanghai. Beyond the docks is shown the "old opium hulk" at anchor in the Whangpoo river, while in the foreground are seen coolies carrying bales of merchandize.

The traffic in opium has always been a smuggling one, and the edict did not prevent its increase. One of the principal obstacles to the suppression of the traffic in the various attempts that have been made arises from the imposition of the *le-kin* tax, a local tax paid upon the drug in transit everywhere throughout the country. This tax—or quasi-tax—although looked upon by the people largely as a "squeeze," is backed by sufficient authority to secure its payment, and at the same time, it affords a means of support to a large army of minor officials whose payment otherwise would have to be met from the provincial treasury or paid from municipal revenues. The *le-kin* tax, it should be explained, is usually a very small impost on the particular item to which it may be applied, but in many instances the list of items is a very long one. In a general way, it may be said, that on its way from the ship that brings the opium to a Chinese port until the drug reaches the ultimate consumer, every parcel of the opium, however small, leaves money in the hand of every man who passes it along—whether official, merchant or keeper of a native opium smoking "den."

As stated before, India was the great exporter of the drug, and it was because the revenues derived by India from its export to China were threatened by the latter that England's first war with the latter country was declared. In 1835 the Chinese Emperor prohibited the trade, and in the same year a quantity of the drug was burned by the Chinese at Canton. Troubles connected with the traffic continued until, at length, in March, 1839, the Chinese Commissioner at Canton ordered the seizure of opium. The British residents were forbidden to leave, and the factories were surrounded and outrages committed. A few days later the British Commissioner at Canton required the British residents to surrender to him all their opium. By May of that year, over 40,000 chests were surrendered and the Commissioner and British residents left Canton, the Chinese afterward destroying the opium.

This was followed by the Emperor of China, in 1840, interdicting all trade and intercourse with England forever. War was declared by Great Britain, and lasted until 1842, when a treaty of peace was signed, Hongkong being ceded to the British. Nothing was said in the treaty of the opium traffic, which went on as before. In 1856 Great Britain was again at war with China, the opium traffic being one of the principal reasons. In this war France was allied with England, hostilities continuing for about two years, when a treaty of peace was signed, one stipulation being a "revision of the tariff." In 1860 the same countries again embarked in war, the opium question still being the *casus belli.* In this expedition the allies marched on Peking, and the summer palace of the Emperor was burned by the British. Peace was signed on October, 24, 1860, and the opium traffic was established.

The years came and went before China again tried to free herself from the baneful effects of the opium trade, but in 1906, the Imperial edict above referred to, ordering the abolition of the use of opium was again issued, the fact being accepted by many in other countries as a real sign of the awakening of China and of an earnest and widespread movement in that country to forever eradicate the opium vice by shutting off the supplies on which it feeds. That the plan only partially succeeded, seems to be the meaning of the despatches reaching this country within the past few weeks.

That the use of opium in China reached enormous proportions is shown in the statement that in 1858, it was suspected that 2,000,000 Chinese smoked opium, while in 1906, a quite conservative estimate put the number of smokers at very nearly one-half of the entire population. The primary reason for this extensive use of opium as a stimulant is said by sociologists who have made a study of the subject to be due to the innate tendency of every civilized or semi-civilized race of mankind to crave for some form of nervous stimulant. This craving for something to exhilarate the spirits, enliven the charm of social intercourse, stimulate the imagination, and to rouse the latent forces of body and mind into unwonted energy is apparently one of the inevitable consequences of civilization.

It is well known that in China the common method of using opium is by smoking, in India by eating the crude drug, and in Europe and America by drinking or swallowing aqueous or alcoholic extracts of opium, as laudanum or other preparations, or by the use of morphine, the alkaloid or active principle which is either administered by the mouth or by means of the hypodermic needle. The drug has to be carefully prepared to make it ready for the smoker's pipe, and quite common are the stories told by travelers of the methods employed by the natives for this purpose. The opium as it comes from India, or from the interior of China, is stripped of its covering of dried leaves, broken into small pieces, put into an iron pan filled with water, and allowed to boil slowly over a low fire, the scum, which rises and which contains whatever impurities there may be, being carefully skimmed off and saved for the "poor" smokers, while the decoction is evaporated to the consistency of treacle, when it is ready for use. It is then put into jars, and sold for consumption, some manufacturers acquiring a reputation for their ingenious and "tasteful" blends of their particular products.

As described by J. G. Goodrich, formerly professor in the Imperial Government College, Kyoto, in his book on China, the pipe, expressly made for this purpose and never by any possibility used for tobacco, is a full joint—or even more—of bamboo, an inch or so in diameter, or more frequently a tube of heavy, precious wood which is bored through with a very small orifice. The pipe is sometimes most elaborately carved and decorated with inlays of jewels, jade and precious stones; there is no mouthpiece, properly speaking, the lips of the smoker being pressed against the broad, flat end of the tube; at the opposite end is a cavity, or sometimes a separate cup, into which fall the ashes. The bowl for the opium is made of earthenware, of an ellipsoid shape, with a very small rimmed orifice on the flat side, and it sets down upon the whole. The rest of the paraphernalia is simple in character.

The opium smoker always lies down when he "hits" the pipe, first divesting himself of his outer gown and stretching himself at full length upon a couch. The couch may differ somewhat in different establishments, but in most of the "regular" places it is a double piece of furniture, a lamp in a shallow tray being placed between the two sections where the two smokers lie. The head of the smoker rests on a hard pillow, not infrequently merely a block of wood covered with cloth or a piece of leather. The smoker dips into the opium a spoon-headed needle and dexterously twists it about until he has gathered up a pellet about the size of a pea; this he holds in the flame of a small vegetable-oil lamp of a particular size and shape made expressly for this opium smoking, with a hood to prevent the flame from flaring and spoiling the opium with soot. When the opium has become dry and spongy, the smoker thrusts it into the small orifice of the pipe, holds it directly over the flame so that full heat shall impinge upon the opium, and with a strong inhalation he draws the smoke deep into his lungs, where he retains it for a remarkably long time and then slowly exhales it through the nostrils. The taste of the half-fluid paste is described as rather sweetish and oily, but the odor of the smoke is intensely disagreeable, pungent, and sickening.

When the charge of opium has been burnt out, the smoker lies listless for a moment while the effect of the fumes is dissipating, and then repeats the process until he has used all his purchase, or taken the full quantity he has prescribed for himself. With the first whiff, the man becomes garrulous and silly, but gradually a shrinking of the features is noticed; a deep unrefreshing sleep of from half an hour to three or four hours' duration then follows, during which the pulse becomes slower, weaker, and more irregular than before the smoking began. After the habit has been taken up, there is a general weakening of the mental and physical powers, and complete recklessness of all consequences, if only the craving for more of the drug can be gratified. The smoker continues a slave to his habit, gradually reducing himself to a mental and physical wreck. Such is the result of a practice that has enslaved the Chinese in the bonds of the most seductive and demoralizing form of self-indulgence known to man.

Rivers are the great arteries of trade in China, and the boats carry human freight as well as opium and other commodities.

The conditions inducing the opium habit have been made the subject of many investigations, both medical and legislative. In many cases the patient who has once experienced the anodyne influence of the drug, readily yields to it upon the slightest occasion, and resorts to its use to alleviate trivial indispositions for which, in ordinary circumstances, he would ridicule the idea of medical treatment. The habit grows upon him and the quantity that first seemed sufficient for his purpose no longer satisfies him, larger doses being taken to quench the craving which knows no rest and which is usually only quieted by the merciful release of death.

A knowledge of these conditions and the increasing use of opium and other narcotics in all civilized countries caused the American Government to enact the Harrison anti-narcotic law in December 1914, which has for its object the control of the sale of not only opium and its derivatives, but that of cocaine, the most insidious of the narcotics. While the law has been in operation but a few years, its beneficial effects are already noticeable, and it is safe to say that legislation in this direction is apt to be extended, rather than repealed. That a great nation like China should again make it easier for her teeming millions to obtain the "foreign drug," the use of which has so increased the poverty of her masses, throws an interesting sidelight on the mentality of those in charge of China's future destiny. For though the Chinese always call opium the "foreign drug," it was formerly grown in half the provinces of the empire and a great many of her officials became rich from the trade. The largest part of the opium consumed in China in former years is said to have been produced at home, rather than imported from India; but it is noted that the Anglo-Chinese Opium Convention agreement signed at Shanghai on May 8, 1911, contained the following clause; "China shall decrease the amount of opium production in proportion to the decrease of the annual importation of Indian opium until the total prohibition of opium shall have been enforced by 1917."

MEDICINE IN DUTCH EAST INDIES

Occidental Doctor Describes Native Classification of Diseases—Methods of Practice Based on Signature and Transmigration Theories

The Committee of the Netherland East Indies Medical Faculty, Utrecht, Netherlands, in 1917 had the happy idea of instituting an Indian Medical Week, during which special lectures on hygiene, diseases and remedies in the tropics, particularly the Dutch possessions, were offered to medical students attending the University of Utrecht. The Indian Week for this year opened on April 29, when Dr. C. E. Benjamins spoke on medical questions in a Dutch East Indian town.

In presenting his subject he stated that the treatment of Europeans offers no special difficulty, although the newly arrived physician will notice a considerable amount of amateur doctoring which not infrequently greatly hampers him in his efforts to cure. This amateur and self-doctoring is still more marked in the case of the Indo-Europeans—persons of mixed native and European descent—foreign orientals and natives, while the conditions are still further aggravated by the fact that owing to the large population and comparatively insignificant number of legal practitioners, the Government does not take action against unauthorized persons who treat tropical diseases with native medicines.

While it must be admitted that many of these remedies have been found to be excellent and that some of the self-appointed healers really know their business, carefully studying symptoms before prescribing the herbs recommended by native medical science, this is by no means true in the majority of cases. Indeed, as might be expected, there are numbers of the less educated Indo-Europeans and natives who, ever ready to tender to the sick advice based on very superficial knowledge which is still further confused by superstitions and prejudices, make matters very complicated for the attending European physicians.

Thus the native custom of classifying diseases as *cold* and *warm*—a division which the lecturer considers may have been derived from the Chinese, always interferes, more or less, with the carrying out of orders as to diet or medicine. Again and again patients will declare that they did not dare to take a certain medicine because it was too cold or too warm.

An interesting side of native methods of healing is that based on the signature and transmigration theories. In the first instance, healing powers are ascribed to products belonging to the animal or vegetable kingdoms on account of resemblance to manifestations of diseases or diseased parts of the body. For instance, a bright red mass—say of red mold—is used to stop nose bleeding. Diseases of the ear are cured by applying any object looking like an ear, as river snails, which, because of their houses, bear some likeness to an ear. The snail is taken out of its shell, crushed, and the messy liquid thus obtained is introduced into the ear. Another harmless remedy, much favored in Central Java, is the hairy, fleshy leaf of the Aasen koeping-matjan—tiger ear leaf—which really is strikingly like the ear of a tiger.

The transmigration theory teaches that the actual or ascribed powers of certain objects are transferred to the patient who uses them. A tiger has a keen ear, therefore the deaf may be cured by using tiger ear leaves. In some districts, it is customary to give popped sondari worms to dancing girls when they have become hoarse after singing in their shrill, nasal fashion. The sondari, let it be noted, is a large earthworm that emits a shrill, high sound at night and the object in giving them to hoarse dancing girls is to effect the transferring of the much admired high note to the girls!

The Chinese residents in Java have similar beliefs and customs, and the Chinese leech in that country is generally some ignorant vendor who has bought some Chinese medical books and promoted himself to doctor. The lecturer obtained a book from one of these persons and found among other curiosities, an illustration of the kidneys, one colored black, the other white. These, it seems, are the centers which bring heat and cold to human bodies in equal proportions.

So many drug clerks in North Dakota have enlisted in the military service of the country that not enough remain in the state to make it worth while to hold the annual convention this year, according to W. S. Parker of Lisbon, secretary of the North Dakota Pharmaceutical Association.

Germany's Stolen Chemistry

Important Scientific Discoveries and Industrial Processes of All Nations Appropriated by the Germans

By TOWNES R. LEIGH, Professor of Chemistry, Georgetown College

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So skillfully have German chemists appropriated and exploited the chemical discoveries of all nations that they enjoy a splendid, but undeserved, reputation, which this article has done much to refute. Published originally in our paper Drug & Chemical Markets it is republished here by special request, and will be reprinted in pamphlet form. Druggists desiring to distribute them to customers and physicians can obtain them for $2.00 a hundred. Let us beat the Germans at their own game of propaganda, and help our own drug trade by helping "to prick the inflated bubble of Germany's chemical supremacy."

When we recall that Samson slew a thousand Philistines with the jawbone of an ass, we intuitively wonder how many he would have slain if armed with the jawbone of a German propagandist, according to whom all things were made by Germans and without them was not anything made that was made. To use a medical term, the modern Teuton seems to be suffering from what is known as paranoia, or the disease of an exaggerated ego. Yet as much as the German has boasted, he has borrowed more; as much as he has talked, he has taken more.

In times of peace he has seized upon the inventions and discoveries of his neighbors for exploitation, shouting as he did so, "They are mine." When chemicals and drugs have been mentioned he has waxed especially boisterous, puffed up his breast, and roared, "They are mine." Indeed, they are not his any more than are the Belgians whom he has deported to till his field and serve his forge. The first chemical works were established by Chaptal, near Montpelier, France. It is time to prick the inflated bubble of Germany's chemical reputation.

Fundamentals of Chemistry

I have before me the leading text-book of general chemistry, the one taught in the foremost universities. Glancing down its index, my eye finally rests upon the word "Law" followed by a list containing twenty-one fundamental laws by which the science of chemistry is governed. There I see the names of Avogadro, Boyle, Charles, Dalton, Dulong and Petit, Faraday, Gay-Lussac, Henry, Le Chatelier, Mendelejeff, et cetera down to van't Hoff—but nowhere do I see the name of a German. Italy, England, France, Russia and Holland flash forth in the glory of their sons wherever the principles of chemistry go; but Germany did not discover one of these secrets of general chemistry. Liebig and Wohler, who in the nineteenth century made important contributions to the branch of synthetic chemistry, received their training from the French. Germany, therefore, talks fast and furiously about the modern chemical industry and commerce with the hope that her clamor will cause the world to forget her debts. But by the aid of Buckley's "History of Natural Sciences," we cannot forget that of the thirty chief men of science of the seventeenth century, only three were of German blood; and, of the twenty-seven of the eighteenth century, again only three were German. During the nineteenth century the science of chemistry made greater progress than it had made in all its past history. The majority of the most important contributions to chemistry during the past century were not made by Germans.

When we look over a catalog of the chemical elements we are at once impressed with the very small number of useful ones discovered and first examined by Germans. Not a component of the air he breathes was discovered by a German. Oxygen is credited to Priestley, an Englishman, who late in life settled in Pennsylvania; nitrogen, first recognized by Rutherford, a professor in Edinburgh University; carbon dioxide, isolated by Black, a Scottish chemist and physicist; helium, krypton, xenon and neon, discovered and first studied by British subjects, Lockyer, Ramsay, Crookes and Rayleigh. Not an element in water was discovered by any German. Hydrogen was discovered by Cavendish, the noted English chemist; and oxygen, its other component, by Priestley, as we have already stated. Not an element in the salt with which we savor our food was discovered by any German. Its chlorine is a gift of that productive investigator, Scheele, a Swede; its sodium, from the versatile Davy of London. The indictment which has been brought against German chemists concerning the elements in air, water, and salt may be extended to cover the elements found in seventy-five thousand other substances, including nearly all of the synthetic compounds used in the world's trade, to which we now wish to turn our attention.

Coal-tar Dye is English.

There is probably no other field in which synthetic chemistry has played so important a role as in the coal-tar dye industry. A brief review of some of the salient points in its development, including the synthesis of the first coal-tar color proves conclusively that Great Britain is the original home of the coal-tar dye.

In 1739, Dr. Clayton, dean of Kildare, first distilled coal and obtained coke, tar and gas. Less than fifty years later the Earl of Dundonald, a Scottish nobleman, obtained a patent for the extraction of coal-tar in commercial quantities. In 1792 William Murdock of England, first used coal-gas as an illuminant. Naphthalene, used chiefly in the manufacture of indigo, was discovered in 1820 by Garden; benzol, the parent substance of the most important dyes, was discovered in illuminating gas in 1815 by Faraday; anthracene, largely used in the synthesis of Turkey-red was first procured by Dumas of France; toluene, used both for making dyes and the powerful explosive, T. N. T., was first obtained by Mansfield; and picric acid, also employed in the manufacture of dyes and explosives, was first prepared by Peter Woulfe, a London chemist.

In connection with these achievements, the importance of the miner's safety-lamp invented in 1815 by Sir Humphrey Davy must not be overlooked; for by the use of that simple and ingenious device, the danger and hazard of mining coal were largely removed.

The great honor of producing the first coal-tar color belongs to W. H. Perkin, an English chemist, who during the Easter vacation of 1856 tried out some experiments in which he was intensely interested. He planned to produce synthetically no less a substance than the valuable alkaloid, quinine. The attempt was a failure in so far as obtaining quinine was concerned; but he noticed that a colored product had been formed. The most interesting feature of his work was the quick perception he had of some possible value of the new substance. The dye was finally purified and given the name mauve, by which it became familiar. For fifty years it was used in printing the English penny postage stamp, by which means England maintained an unique memorial to her celebrated chemist, perpetuated even in the remotest part of the world, wherever her mail service may have penetrated.

Not long after his first great discovery, Perkin perfected a method of manufacturing alizarin, with the result that the extraction of that dye from madder has been practically abandoned; and the enormous acreage formerly devoted to the cultivation of that plant, has been given over to cereals and other crops. Thus the laboratory for the first time in history became a successful competitor with the land.

Other French and English Discoveries

After the synthesis of mauveine by Perkin the synthetic dye industry grew by leaps and bounds. Frequently methods for the preparation of the same dye were discovered independently by different chemists, and a common dye was often sold under different names. For example, Verquin, a French chemist, manufactured fuchsine and this same dye became known as magenta and rosaniline.

In 1863, an Englishman by the name of Lightfoot produced aniline black; and in 1873, the first sulphur dye was discovered by Croissant and Brittoniere of France. In connection with the development of dyestuffs it should be recorded that to a French chemist is due the modern method of the preparation of the excellent bright yellow dye for animal fibres. Another quality which this dye possesses, is that it may be used for the detection of hemp, flax and cotton in woolen goods, inasmuch as it does not color vegetable fibres.

The American Dye Industry

Germany has exploited but did not discover coal-tar dyes. In 1913 she exported about twelve times as much synthetic color as was manufactured in the United States. Since the outbreak of the war American chemists and manufacturers have made far greater progress in the production of dyes than was ever made in Germany in the same length of time.

It may be that America is destined to control the dye industry. At the present time a very large percentage of all the known coal-tar colors are being made in America, and already there is an investment of two hundred million dollars for the production of colors and intermediates. American dyes have established their prestige in foreign markets, and in this respect the future holds an auspicious promise. The total domestic production of aniline dyes in 1915 was valued at $2,470,000. Our exports for the fiscal year 1917, of aniline and natural dyes, were $11,710,887, an amount greater than the value of all the synthetic organic chemicals including coal-tar dyes imported annually into the United States before the war. Our total export of dyestuffs for the last calendar year amounted to upwards of fifteen millions of dollars.

It is not a strange or abnormal situation that we have been behind Germany in the manufacture of dyestuffs. In this country we have had new mines to exploit, new fields to cultivate and many industries of more immediate importance to claim the full attention of our men of enterprise and scientific training. According to Dr. Leo H. Baekeland, who has carefully investigated the subject, the chewing gum industry of the United States exceeded by several millions of dollars the value of all synthetic chemicals, dyestuffs included, imported every year into the United States. One single chain of five-and ten-cent stores in 1913 exceeded by $11,000,000 the whole of the German synthetic dye industry throughout the world. In the same year the entire German color industry paid $11,000,000 in dividends, while one American company with a single standardized product—the Ford motor car—did a greater annual business than all the German coal-tar dye plants together with their 1,200 different products, and earned four times their combined dividends while paying three times their wages.

As far as the mineral chemical industries are concerned, America, even before the war, could stand excellent comparison with Germany or any other country. In fact, when it comes to the production of acids and heavy chemicals we in many branches were decidedly ahead of Germany. Especially was this true of our important electro-chemical industries which were developed far ahead of those of any other country.

The manufacture of synthetic dyes is only one of the many ideas that Germany borrowed from her more resourceful neighbors. The very chemicals which she uses to prosecute her war were not first produced by the subjects of the Kaiser. Howard, an English chemist, first made the fulminate of mercury; Schoenbein of Basel, Switzerland, guncotton in 1845; Sobrero of Turin, Italy, nitro-glycerine in 1846; Alfred Nobel of Sweden, dynamite in 1856 and blasting gelatine in 1878; Veille of France, military smokeless powder in 1886; Sir Alfred Abel of England, cordite; Egg, likewise an Englishman, devised the percussion cap; Picford his compatriot, the safety fuse in 1831; and it was Benvenuto Cellini, an Italian, who introduced the blending process in gunpowder; chlorine gas and a dozen other chemicals of modern warfare were not first "Made in Germany." And finally we have it on the authority of Charles E. Munroe, a specialist on explosives, that out of sixty-two names of experts on explosives two stand out supreme, those of Abel of England and Bertholet of France.

Fixation of Nitrogen

Though Germans may say much about the fixation of nitrogen, what credit do they deserve for its development? As long ago as 1784 the English chemist, Cavendish, observed that when electric sparks are passed through air, the oxides of nitrogen are formed and by absorbing these oxides in water or in alkalies, nitric acid or nitrates could be produced. However, his discovery lay dormant until the demand for nitrates increased to such a degree that it became evident that the natural deposits of these substances were in danger of being exhausted before many years.

In 1898 Sir William Crookes, President of the British Association, delivered the solemn warning that the years of plenty were quickly passing; and before long the greatly increased intensive cultivation would use up all the known sources of combined nitrogen, and there would be no Egypt from whose granaries supplies could be obtained. Commercial chemistry was rapidly increasing its demands for nitrogen compounds in the manufacturing of dyes, explosives, ice, soda and cyanides, the last being used in the extraction of gold from its ores and in the plating of metals; yet the source of supply of native nitrates showed no such elasticity. The Englishman's warning caused chemists and manufacturers to turn their attention to that important field. The first to solve successfully the problem of the combination of atmospheric nitrogen on a commercial scale were two Norwegians, Birkeland and Eyde. Other methods for the fixation of nitrogen commercially have since been developed. Our government is now spending millions of dollars in the construction of nitrate plants which are destined to place us in the forefront among the nations of the world in this particular field.

Important Processes

Few of the valuable chemical processes were developed by German brains. The Leblanc method of making soda-ash directly from salt was devised by a Frenchman in behalf of his country and named in his honor. The Solvay method, now more generally used, was perfected by a Belgian and bears his name. Soda-ash is employed in the manufacture of glass, soap and many chemical reagents and the enormous quantity of 2,250,000 tons is produced annually.

The soda process for making paper from wood pulp was patented by Watt and Burgess of America. The sulphite process for the production of paper pulp from wood and the method of decomposition of fats by steam at high temperature, largely used in the manufacture of soap, were the work of another American, R. A. Tilghman. The cyanide process of obtaining gold and silver was conceived by our fellow country men, McArthur and Forest. The process of obtaining aluminum cheap was devised by C. M. Hall, also an American, while Cowles of Cleveland, produced aluminum bronze. The process of making carborundum and graphite in commercial quantities was the work of E. G. Acheson. The French and the Americans were the first to manufacture ice by the use of liquid ammonia.

The process of the softening of water was worked out by Dr. Clark of Aberdeen, Scotland. The filtration of water for public use was first carried out by Mr. James Simpson of Chelsea Water Works, London, England. The decolorizing power of vegetable charcoal was first noticed by Lowitz of St. Petersburg, and that of animal charcoal, the basis of the modern refinery, by Figuier of Montpelier, France. The process of hardening fats by the use of hydrogen we owe chiefly to an English firm, Messrs. Crossfield and Son. By their process whale-oil is now converted by large amounts into solid material suitable for the manufacturing of soap. The important contact process which is largely used in the manufacture of sulphuric acid, has been developed upon the observation made as far back as 1831 by P. Phillips, a vinegar merchant of Bristol, that the oxidation of sulphur dioxide is greatly accelerated by the presence of platinum. The Englishman, John Mercer, taught us to mercerize cotton. The Frenchman, Chardonet, the process of making artificial silk. The method, however, by which most of the imitation or artificial silk is made at the present time is the viscose process invented by the English chemists, Cross and Bevan, in which wood pulp is used. H. Mege of France gave us oleomargarine; malted and condensed milks are distinctively American born and developed products. Hyatt of America gave to the world celluloid.

To M. Verneuil of Paris, we are indebted for the artificial ruby, the real ruby of science which is as much the ruby of Ceylon and Burmah as is the water formed by burning hydrogen the water of the rain—identical in property and composition. In a small factory in the Rue Lafayette is to be found the commercial production of rubies on so cheap a scale as to decree the doom of the ruby-mine, a doom as certain as that decreed by the synthetic dye to the indigo industry of India. To Henri Moissan of the Sorbonne, who produced tiny artificial diamonds, belongs the honor of the art and practice of electro-metallurgy, for while other men have done things before and after his work, he made three hundred contributions of new substances in the electro-metallurgical field. In the ever widening circle of factories that surround Niagara Falls are to be found the greatest high temperature industries in the world.

Very different from the dye, explosives and other synthetic products just described is the remarkable substance produced by the American chemist, L. W. Baekeland, and which has quickly acquired a great industrial value. This substance, called Baekelite, is synthesized from phenol and formaldehyde; it is infusible, insoluble, an excellent substitute for amber, the best of insulators for electricity and though more durable than celluloid, it is not inflammable and is less expensive.

The struggle between the land and the laboratory has been desperate, not only in the domains of dyestuffs and commercial chemicals but in the realm of perfumery and aromatics as well. In none of these scientific battles did Germany show valor until she learned the tactics of her neighbors. In the perfume industry art as well as science is required, because its success is dependent upon a creative imagination, tempered with good taste, as well as upon the skill of the chemist—the very qualities for which the Frenchmen are noted. "The great perfumer is the musician in odors." With some eight notes in his scale he strikes a harmonious scent. Paris is, of course, the center of the perfume confections. No first-class, natural or synthetic, extract or perfume is imported from Germany.

German chemists have discovered not a single one of the important basic laws of chemistry, nor isolated one of the commoner chemical elements, nor made any of the great fundamental discoveries in industrial chemistry and yet Germany has been able to foist upon the world a reputation as chemical headquarters. The reason is not difficult to discover. Germany has made a practice of seizing the chemical discoveries of other nations. She has exploited them professionally and industrially as her own. The great bulk of the chemical literature has been produced in Germany and German chemical investigators have not hesitated in their writings to ignore blissfully the pioneer work done by chemists of other lands. German chemical scholarship has long been organized thoroughly on an industrial basis, and the German chemical manufacturers have been keen to profit by every advance in research. The War has shown the world that it is not dependent upon German chemistry, and the advances made in England, France and the United States during the past four years are greater than have been made in Germany during the past century.

(To be continued)

Siomine is hexamine tetra-iodide $(CH_2)_6N_4I_4$. It contains 78.5 per cent. of iodine, and is put forward as a substitute for organic iodides, no therapeutic claim being made for the hexamine content. The dose is the same as that of potassium iodide. It is an American product.

Methyl-phenol Serum is a serum impregnated with methylene blue and phenol. It is used as an intravenous injection in gonorrhoea.

Neoquinine is the name given to a French preparation, said to be quinine glycerophosphate.

The Editor's Correspondence

OFFICIAL SYNTHETIC DRUGS

Editor, The Pharmaceutical Era:

It is important that pharmacists should be familiar with the official names for synthetic drugs so far adopted by the Federal Trade Commission. These are:

Arsphenamine for salvarsan, diarsenol and arsenobenzol, etc.

Neoarsphenamine for neosalvarsan, neodiarsenol and novarsenobenzol, etc.

Barbital for veronal.

Barbital-sodium for medinal and veronal-sodium.

Procaine, for novocaine.

Procaine nitrate for novocaine nitrate.

Phenylcinchoninic Acid for atophan.

Under the authority of the Trading with the Enemy Act and with the advice of the Sub-committee on Synthetic Drugs of the National Research Council, the Federal Trade Commission has provided for the manufacture in this country of the important synthetic drugs which before the war were imported from abroad, chiefly from Germany.

To insure the production of the synthetic drugs urgently needed, the Federal Trade Commission had to make it worth while for manufacturers to undertake the preparation of these articles without permitting their cost to become prohibitive, but rather approaching the prices current before the war. This was accomplished by granting licenses good for the life of the patents under which such drugs are made and thus making a permanent investment for their production profitable. Partly to insure for manufacturers a market for their products after the war and in large part inspired by the idea of encouraging the establishment of a permanent American industry in these important articles, the Commission wisely decided that American houses should be put on the same footing as the foreign houses for the after-the-war competition by imposing on all licensees the obligation to use new, official names for the articles, names which after the war will be open to all competitors, domestic and foreign.

Obviously if these names are once in common use the exclusive rights of the foreign houses and their agents of using after the war the old-established trademarked names will not seriously handicap the American firms, and all competitors will be on the same footing, with the advantage only to those who can produce most cheaply the better article.

It is obvious that the American physician in final instance is the arbiter who can put this wise plan into operation and establish the new names firmly by prescribing these remedies by their new official names. However, *the adoption of these names by physicians will depend very largely on the pharmacist's familiarity with them.* Unless the physician is confident that the pharmacist to whom his prescription is taken is familiar with the official names, he will feel constrained to use the old, proprietary names. The pharmacist, therefore, should familiarize himself with the new, official non-proprietary names given at the beginning of this letter.

Yours truly,

Julius Stieglitz, Chairman Sub-committee on Synthetic Drugs National Research Council.

University of Chicago, July 15, 1918.

URGES NARCOTIC COMMISSION

Senator Frelinghuysen, of New Jersey, has introduced a resolution into Congress, authorizing the President to appoint a commission to investigate the subject of narcotic and habit-forming drugs, especially as dispensed at soda fountains.

"It is openly charged by scientific men and statisticians that the use of narcotic and habit-forming drugs is largely on the increase," said Senator Frelinghuysen in his resolution, "not only in the form of opium, morphine, cocaine, heroin and kindred opiates, but also certain so-called 'soft drinks' charged with caffeine, sold at innumerable fountains to our young men and young women. It is alleged that in the neighborhood of many of our military camps purveyors of these deleterious drugs are to be found, stealthily engaged in the sale of the same to our soldiers, and certain caffeine-charged 'soft drinks', so called, notoriously injurious to health, are openly sold to men in uniform.

"Not only is the morale of soldiers, and of our young men and young women in general, sensibly lowered by the prevalence of this habit, but it is estimated that the actual money loss to the Nation by reason of this state of affairs amounts to hundreds of millions of dollars annually, the economic loss in wasted lives, in sickness, loss of wages, accidents, incapacity, and crime probably aggregates hundreds of millions of dollars additional, and the existence of this evil has a demoralizing effect upon the efficiency of our Army to a degree not appreciated by the general public."

The resolution authorizes the President to appoint a commission of not more than three citizens of the United States to make inquiry into the subject of narcotic and habit-forming drugs.

It is provided that the commission shall "investigate the causes which lead to the use of such drugs, the extent of the use of such drugs, and the kinds of drugs used, and shall also investigate the subject of the drug addict and such other factors as in its judgment have an important bearing upon use of narcotic and habit-forming drugs, and shall recommend to the President the best methods in its judgment of regulating the importation, manufacture, sale, and use of narcotic and habit-forming drugs, and of solving the problem presented by the drug addict."

The commission is to make its report before the convening of the next session of Congress.

JAPANESE PHARMACIST MAJOR GENERAL

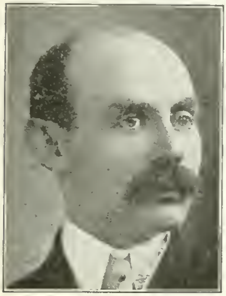
Dr. Jokichi Takamine, president of the Takamine Laboratory, Inc., of New York, who is now in Japan, sends the Era a communication containing an account of a celebration dinner held at the Seiyoken Hotel, Tsukiki, Tokyo, in honor of Dr. M. Hata, president of the Army Sanitary Medical warehouse, who was recently promoted to head of the Ordinance Department of the Japanese Army with the rank of Major General.

Dr. Takamine states that the creation of a Generalship for Pharmacists in the Army's Sanitary Department has been for some time a pending question, but at the meeting of the Cabinet of March 23 last, it was decided to change the Army Pharmaceutical Ordinance to suit the purpose. Dr. Hata is the first man to be honored by this rank. As in other parts of the world, Japanese pharmacy has hitherto been neglected, and this event was naturally hailed by Japanese pharmacists as their triumph. Whether the appointment was influenced by the present war or not, the recognition of pharmacy by the Government will go a long way toward impressing Japanese minds with its importance. This fact, Dr. Takamine states, is especially significant in a country like Japan, where the idea of sanitation is not as prevalent as in Western countries.

An Appeal for "A Mile of Dimes"

By J. LEON LASCOFF, New York

The reception accorded the following paper by those who heard the author read it constituted one of the distinctive features of the recent meeting of the New York State Pharmaceutical Association held at the Catskill Mountain House. Immediate steps were taken to make the "appeal" a tangible reality, and before the close of the convention a fund of more than $3000 was pledged by the druggists, the Travelers' Auxiliary alone contributing $400. That the plan will succeed is assured, and there is every reason to believe that it will not be long before the "New York State Pharmaceutical Ambulance" will be engaged in "errands of mercy" to the American patriots on the Western Front. —Editor.



J. Leon Lascoff

At a meeting held recently of the local branch of the A. Ph. A. several papers were read, outlining in a general way what had been done by the Manufacturer, Wholesaler and Jobber to help "Win the War." Very little was touched upon what we, the retail pharmacists, had done in this respect. This hurt me very much, for I know for a positive fact that we not only "did our bit" but "Went over the top" in doing our share of patriotic endeavor. Not only did we subscribe to the First, Second and Third issues of the Liberty Loan Bonds; we purchased Thrift and War-Saving Stamps; and gladly and willingly gave our co-operation in every project launched by the Red Cross Society—regardless of the personal sacrifices it involved, because we knew we were helping a cause most dear to each and every one of us.

We know the burdens the War has laid upon the World—we realize the horrors and sufferings it entails and, for this reason, I want to present a plan to which I trust every member of the Association will lend his aid. Let it be our boast that this organization has sent an ambulance to the battle lines. Many of our boys have joined the colors; some are now in France—more than 3,000 miles from home, and they have gone on a terrible errand. Courage, honor and idealism are the characteristics possessed by these boys. They know the Country's prosperity is their prosperity; its danger, their danger. They are willing and anxious to do their share to help "Win the War." We, who remain at home, have not the honor of giving our lives for our country, but we can figure in a humanitarian way by subscribing to the "Mile of Dimes." That is what I propose calling this "Drive." There are 5,280 feet in a mile, and, I would suggest that each member of the New York Association take a "Foot" and get it filled with dimes. It is up to us to take care of our absent brothers, who have given the best years of their lives to our profession, and whose future was filled with golden dreams, which they so willingly put aside when the call of duty sounded. If you want to help your country, you have an excellent opportunity right at hand. Convert your inanimate dimes into living, breathing service. Let your attitude reflect your love and allegiance to the boys "over there" by doing to the best of your ability in helping to raise this Fund, so that we may be able to present in the very near future the "New York State Pharmaceutical Association Ambulance" to the Government. There is nothing more admirable in a man than loyalty and, I trust, that not a member of our association will be so unpatriotic as not to subscribe.

Pharmacists do not get a commission in the Army—the Edmonds Bill was introduced in Washington, July 25, 1917, but so far nothing has been done. Therefore, won't each and every man here pledge himself to see that our boys get the comforts of home? You can do this by contributing to this "Emblem of Mercy" to France—the New York State Pharmaceutical Association Ambulance. And now, I would suggest that a committee be formed to take charge of the Fund. I, myself, will present the first thousand cards to the State Association and, if need be, a second thousand.

I trust, my brother colleagues, I have explained the absolute need of co-operation in this plan. I have every reason to believe that you will, and that our boys "over there" will be proud of the fine spirit exhibited by the home members. Furthermore, down the annals of history's pages shall go the name of the New York State Pharmaceutical Association, the members of which are second to none in their effort to elevate the profession of pharmacy.

JACOB WHITE DEAD

Jacob White, age 74 years, president of the White-Stokes Company, Inc., of Chicago and Brooklyn, died at his home in Chicago, Wednesday, July 3, after an illness of two days, following a cerebral hemorrhage. His death closes a career of more than a quarter of a century in the wholesale confectionery field as distributer and manufacturer of candies and later a manufacturer of pure food products.

Mr. White was one of the organizers of the White-Stokes Company, and continued in active management of its affairs until a few days before his death. He was also a director of the Lincoln State Savings Bank of Chicago at the time of his death. He was a veteran of the Civil War, and for many years active in G. A. R. circles. He is survived by the widow, one son, and three daughters.

The Cincinnati branch of the American Pharmaceutical Association, at its recent meeting, held its annual election, the following officers being chosen to serve during the ensuing year: President, Louis Werner, Jr.; vice-presidents, Theo. Wetterstroem and Frank H. Freericks; secretary, Chas. A. Apmeyer; treasurer, Dr. Frank Cain. The Association at this meeting went on record as favoring the movement for the establishment of a separate pharmaceutical corps for the United States Army, and pledged its co-operation in the work of the National Service Association and other organizations toward securing legislation.

Obituaries

W. L. DEWOODY

William Lawrence Dewoody, head of W. L. Dewoody & Co., wholesale and retail druggists, Pine Bluff, Ark., died on June 30, in the 70th year of his age. He had been in failing health for some years. He was born at Arthur, Ala. in 1848. His father was a druggist, and from him the son learned much of pharmacy and field botany, his schooling being interrupted by the Civil War. In 1868 he purchased a drug store, but two years later moved to Pine Bluff, where he founded the business which he continued until his death. Mr. Dewoody was an active member of many organizations, and his frequent attendance at the annual meetings of the American Pharmaceutical Association, of which he was a life member, gave him an extended acquaintance with pharmacists throughout the entire country. He was also wellknown in the jobbing trade, his company being a member of the National Wholesale Druggists' Association. For many years Mr. Dewoody had been prominently identified with the practice of pharmacy in Arkansas and rendered valuable assistance in securing pharmaceutial legislation beneficial to the trade in that state, always standing for clean business methods, commercial fairness and professional advancement. Besides serving as a member of the Arkansas Board of Pharmacy, he was prominently connected with various business enterprises and was numbered among the best known citizens of the State.

W. L. Dewoody

WILLIAM A. DOHANY

William A. Dohany, for twenty-seven years owner of the drug store at 695 Michigan avenue, Detroit, Mich., died in that city on June 28, from an attack of gastritis with ptomaine poisoning. He was born at Farmington, Mich., in 1854. After graduating from the Michigan Agricultural College in 1884, he entered the University of Michigan, and he graduated from the College of Pharmacy of that institution in 1887. Shortly afterward he took charge of the pharmacy of E. M. Lacy at Sault Ste. Marie where he remained for two years. Returning to Detroit in 1889, he went with the Home Savings Bank, and then bought the store which he conducted to the time of his death in 1891. In 1909 he was appointed a member of the State board of pharmacy by Governor Warner, a position he held for six years, serving as president of the board for two terms. He was a member of various pharmaceutical organizations.

William A. Dohany

GEORGE D. TIMMONS

George D. Timmons, Ph. C., B. S., dean and professor of chemistry of the department of pharmacy, Valparaiso University, Valparaiso, Ind., died at the Methodist Hospital, Indianapolis, on July 19, after an illness of ten days. Death was due to typhoid fever. Since the close of the school year in June, Prof. Timmons had been working in the advertising department of Eli Lilly & Co., Indianapolis, taking the place of one of the staff who had joined the colors.

Prof. Timmons graduated from Valparaiso University with the class of 1897, and soon thereafter became an assistant in the laboratory, being advanced successively as instructor and director of the chemical laboratories and later, professor of chemistry. In 1908, he was given full charge of the pharmacy and chemistry departments, a position he held up to the time of his death. He joined the American Pharmaceutical Association in 1905. He is survived by his wife, who served as chairman of the Women's Section of the A. Ph. A. in 1906, and who has been active in getting the women connected with pharmacy interested in the work of that organization.

G. D. Timmons

H. K. MULFORD RECEIVES HONORARY DEGREE

At the recent commencement exercises of Lafayette College, Easton, Pa., the honorary degree of Master of Science was conferred upon H. K. Mulford, vice-president of the H. K. Mulford Company, of Philadelphia. Professor Edward Hart, of the Department of Chemical Engineering, in presenting Mr. Mulford to the president of the college for the degree, spoke as follows:

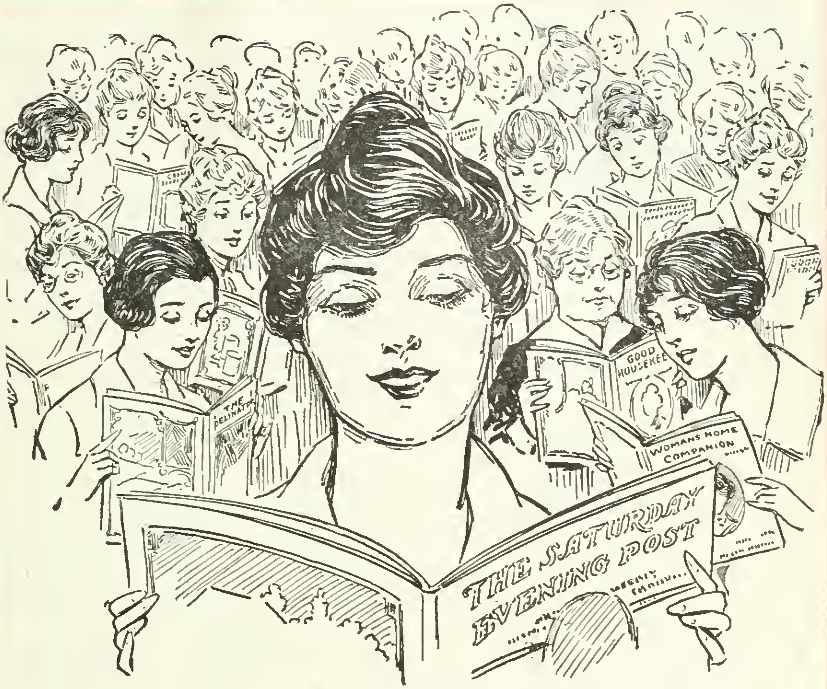
> "I have the honor to present as a candidate for the honorary degree of Master of Science, Henry Kendall Mulford, pharmacist, who has led his profession in the field of preventive medicine—in that field where Jenner first planted seed. It has been truly said that the good physician is the great benefactor. How much more a benefactor the man whose work guides and extends the activities of the good physician. I present to you a man whose work has saved the lives of many thousands and who in these latter trying days has been untiring in his work for humanity, organizing new industries and extending the old ones as the need arose. He is a worthy candidate for this honor, a fine writer, a fine speaker, a fine man."

TREATMENT OF VENEREAL DISEASE IN N. Y.

State Commissioner of Health, Herman M. Biggs, calls attention of druggists of New York to Section 343-q of the Public Health Law as amended by chapter 264, Laws of 1918, relating to the treatment of venereal disease, which was signed by Governor Whitman on April 17, and became effective immediately. The section of the law is as follows:

"Treatment only by physicians or on their prescriptions. No person other than a licensed physician shall treat or prescribe for a case of venereal disease, or dispense a drug, medicine or remedy for the treatment of such a disease, except on prescription of a duly licensed physician. Such a prescription shall be retained by the person dispensing such drug, medicine or remedy, and no copy of such prescription shall be made by or delivered to any person, and such prescription shall be filled but once."

The violation of the provisions of this act is a misdemeanor and is punishable by fine or imprisonment.



Be Sure to Paste These Five Page Advertisements on Your Window

The first big gun in the national advertising campaign of Davol Rubber Goods will be fired September 7th, on which date there will appear a full page in the Saturday Evening Post. This will be followed by three full pages in other powerful publications and a full page in colors in the Butterick Trio.

Here is the page schedule for the Fall months:

Publication	Size of Adv.	Date of Issue	On Sale
Saturday Evening Post	Full Page	September 7	September 5
Butterick Trio	Page in Colors	October	Sept. 20-25
Woman's Home Comp.	Full Page	October	" 20-25
Good Housekeeping	Full Page	November	October 25
Literary Digest	Full Page	November	(Special druggists issue)

A large number of half-pages and quarter-pages are also scheduled to appear in a big list of national magazines IN ADDITION to the full pages noted above; but the latter will form the big high-spots in rubber sundries advertisements. We, therefore, urge every druggist to clip these five pages from the different publications and paste them on the most prominent part of your store window. They will increase your sale of rubber goods wonderfully. Hundreds of people right in your neighborhood will see these advertisements—see that your stock of Davol Rubber Goods is complete. Order through your jobber. Tear out this advertisement now as a memo of when the five full advertisements are to appear, and go strong on window displays on the dates these publications come out.

DAVOL
QUALITY ℞ SERVICE
RUBBER GOODS

DAVOL RUBBER COMPANY
Providence, R. I. **Established 1874**

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Your Own Tooth Paste

It is essential that any preparation sold under your own label be of the best quality obtainable, or you cannot hope to compete with advertised products. The prevalence of cut-prices compels druggists to sell a constantly increasing line of special label preparations.

There are Several Reasons why the

SHEFFIELD DENTIFRICE CO.

should make your special label tooth paste.

FIRST—They are the oldest manufacturers of tooth paste in the United States.

SECOND—They manufacture and decorate their own pure tin tubes.

THIRD—They use only the best and purest ingredients obtainable.

FOURTH—They guarantee the paste to keep perfectly in any climate for a period of not less than one year from date of shipment.

FIFTH—They furnish a list of ingredients to all purchasers, upon application, so that you have full knowledge of the preparation which you are recommending.

SIXTH—Each tube has a flat opening, is clamped at the bottom, wrapped in transparent wax paper, with descriptive circular. Color work on the tubes matches the cartons in printed matter and design.

HOW TO SELL—We will furnish you with the list of ingredients upon application. Your dentist will gladly recommend it if you tell him the formula. Sell it in conjunction with tooth brushes, brush together with a tube at a price which will enable you to make a liberal profit on both articles. Sell it in one-half dozen or dozen lots, so that the whole family will use it. Some of our customers sell in lots of one-half gross, one gross and upwards to public and private institutions. The packages are beautiful, equal in appearance to any advertised paste, and prettier than many.

The high quality backed by our guarantee, supplies you with a product both pleasant and profitable to sell. For samples, prices and full information, address

B. F. ALLEN CO. - - **417 Canal Street**
SOLE U. S. AGENTS **NEW YORK CITY**

THE QUESTION BOX

The "*How to Do It*" Department

Conducted by Pharmaceutical Experts

For the benefit of ERA Subscribers

Infusion of Digitalis Criticised

(P.D.C.)—"We are anxious to know through your publication what brother pharmacists think of infusion of digitalis U.S.P.IX? In our estimation it is a very poor formula, and the preparation lacks the elegance and stability that a U.S.P. product should have. We realize that infusions should be freshly made, but this one when taken home will start to look like cloudy vinegar before the patient has used a small bottle. We have fallen back to the infusion of the U.S.P.VIII in this instance, the one with the alcohoic content, which is 1000 times superior."

While we should be glad to hear of what pharmacists think of this formula, as our querist suggests, the most important opinions on this preparation should come from the physicians, and the appearance of these evidently is just what caused the Committee of Revision to adopt the present pharmacopoeial formula. The addition of alcohol to the preparation of the previous Pharmacopoeia was for the purpose of preserving the infusion, which it did not always do, and the preponderance of medical authority favored leaving out the alcohol altogether, for the freshly prepared infusion made with warm water alone readily extracted the glucosides of the drug, and the resulting preparation fully represented the therapeutic activities of the digitalis. Elegance is always desirable in the appearance of any preparation, but it would be manifestly unwise to work for this end if the remedial action of the preparation should be thereby injured or weakened. In the use of drugs of this type, which are rarely ever employed except upon the advice of a physician, the prescriber must be allowed to designate the form in which the drug shall be administered. Hatcher and Eggleston, working on this problem, have stated that the preparation is fairly stable when prepared and kept with ordinary care, and that the addition of alcohol to the infusion is unnecessary. If the prescriber agreed that infusion of digitalis U.S.P.VIII would answer his purpose, the pharmacist would be justified in using it; where the infusion of digitalis is ordered on prescription without qualification, no preparation except that made according to the present Pharmacopeia will meet the official requirements.

Nomenclature in a Prescription

(M.L.)—"A discussion has arisen in regard to the correct way of writing in a prescription the item, 'mixture of rhubarb and soda.' According to the U.S.P., it can be written 'misturæ rhei et sodæ.' The person who has entered into the discussion states that the word 'natrii' can be substituted for the word 'sodæ,' and the meaning would remain the same. Please advise us."

The title "mistura rhei et sodæ" is no longer in the Pharmacopoeia, although it found a place in the U.S.P. VIII as here given, with the corresponding English title, "mixture of rhubarb and soda." The formula, however, was adopted in the Fourth revision of the National Formulary, where it now appears under the title "mistura rhei composita," or "compound mixture of rhubarb," although the former Latin title and the corresponding English name, "mixture of rhubarb and soda,' are given as synonyms. While the title of "mistura rhei et sodæ" would not be incorrect professional usage would indicate that the mixture should be prescribed under the title "mistura rhei composita," changed, of course, to agree with the grammatical construction of the prescription, thereby following the official guide as to nomenclature.

Relative to the substitution of the world "natrii" for "sodæ" in the above title, we do not think any one would experience difficulty in determining what is wanted, for every pharmacist who has learned the names of the elements knows that "natrium' is the name of the element sodium, being derived from "natron," the old name for certain natural deposits of carbonate of sodium, from which came the symbol "Na," now universally employed by chemists to indicate the element sodium. In the German vernacular, natrium or some one of its derivative forms is always used to designate sodium and its compounds, as "natriumbikarbonat," or "doppeltkohlensaures Natron," or the Ger. Ph. title, *Natrium bicarbonicum*, the sodium compound used in the preparation of this mixture. But why use "natrii" when American usage, especially at the present time, gives a preferred term?

Saponifier for Dentifrices

(Querist)—Possibly there are substitutes for castile soap that may be used in dentifrices, but they could hardly be called "saponifiers," for strictly speaking, the term "saponifier" means an agent that will produce saponification and there are no compounds that will unite to form a soap, as that word is generally understood, except the fatty oils and an alkali brought together under certain prescribed conditions. It is possible, however, that instead of trying to make your preparation really saponaceous, you could add to it some powder which, when the dentifrice is used with a brush on the teeth, would tend to form a sort of an emulsion with the saliva, thus producing a froth or foam in the mouth. It is probable that compound powder of tragacanth might do the trick, but the quantity necessary would have to be worked out by experiment. This powder is quite generally used in pharmacy as an emulsifying and suspending agent, and preparations containing it always becomes more or less "foamy" when shaken with water, but in no sense could tragacanth be called a "saponifier." Compound powder of tragacanth is made by mixing intimately 1 part each of finely powdered tragacanth, gum acacia and starch with 3 parts of finely powdered sugar. Just how completely the use of this powder will meet your conditions needs to be worked out practically, but it is believed that such an addition would give the "foamy" effect with the saliva when the dentifrice is used.

The use of quillaja or other vegetable drug containing saponin for the preparation of saponaceous dentifrices was formerly somewhat common, but the opposition to the use of saponin or saponin-producing substances in soda water as "foam producers" by boards of health has caused some to look with distrust upon its employment. Most saponins are acrid and poisonous, though pure saponin is stated to be non-toxic. Licorice root and guaiac wood both tend to increase the foaming properties of liquids to which they may be added, the saponin obtained from these sources being practically non-poisonous, as its hemolytic action is very slight. The addition of either one of these drugs to your dentifrice is not recommended, however.

Colorless Tincture of Benzoin

(J. F. S.)—"Please publish a formula for making a colorless tincture or solution of benzoin. In making a benzoin almond lotion, I cannot get the milky emulsion as in the standard products found on the market."

There is only one standard method of making tincture of benzoin, a typical process being that followed by the U. S. Pharmacopoeia. The formulas given in other pharmacopoeias may vary slightly as to proportions of benzoin and alcohol, and in the detail of manipulation, but in the use of any of them the resulting product contains the resinous and other constituents of the benzoin which are soluble in the alcohol. The tincture made according to the U. S. P. process is brownish red and yields with water a milky mixture having acid reaction. This reaction of the tincture with water is familiar to all pharmacists who have prepared the cosmetic preparation known as "lait virginal" or "virgin's milk," which consists of 1 part of tincture of benzoin and from 20 to 100 parts of rose water. Just what you mean by a "colorless tincture," we do not understand, for all alcoholic preparations made from any of the standard varieties of benzoin found in the market will be of the brownish-red type, depending upon the impurities and color of the resin used in making the tinctures. Both of the official varieties of benzoin have considerable color, the lumps of the Sumatra variety occurring in reddish-brown, reddish-gray, or grayish-brown masses, and the pebble-like tears of the Siam variety of a yellowish-brown to rusty brown. According to pharmacognosists, the Siam variety is the purest and least variable.

Cosmetic lotions made from tincture of benzoin and almonds are usually milky emulsions, depending upon the materials used in their preparation. Here is a formula from the French:

Eau Cosmetique

(1)

Bitter almonds	2 drams
Sweet almonds	6 ounces

Bruise and add

Orange flower water	1½ ounces
Rose water	3 ounces
Tincture of benzoin	15 drops

Sometimes soap or glycerin is added to lotions of this type, as in the following formulas:

(2)

Blanched bitter almonds	3 drams
Tincture of benzoin	4 drams
Soft soap	1 dram
Rose water	8 ounces

Beat up the almonds with the soft soap, emulsify with the rose water, strain, and add the tincture.

(3)

Blanched almonds	2 drams
Curd soap	½ ounce
Spermaceti	2 drams
Almond oil	½ ounce
Rectified spirit	½ ounce
Tincture of benzoin	2 drams
Otto of rose	5 minims
Oil of rose geranium	5 minims
Glycerin	2½ ounces
Rose water to	20 ounces

Melt the spermaceti and oil together, add the curd soap, and continue the heat until uniform; then transfer to a warm mortar and add gradually about an ounce of the rose water boiling. Beat up the almonds well in another mortar and add the spermaceti mixture to this paste. Mix thoroughly and stir in the remainder of the hot rose water to form an emulsion. To this add the oils dissolved in spirit and tincture, strain through fine calico, and make up to 20 ounces with rose water passed through the material on the strainer. The author of "Pharmaceutical Formulas," from which this formula is taken, states that it is one of the best of the type, keeps well, and is a good soothing application.

Sodium Stearate in Greaseless Cold Creams

(E. W. B.)—We have had no practical experience with the formula on page 123 of the Era Formulary for preparing "greaseless cold cream of sodium stearate," but this formula has been recommended as producing a satisfactory preparation of the so-called "greaseless" type. In practice, however it is generally known that stearate creams, whether made with potassium or sodium carbonate, will take up a very large proportion of water, but unless the cream made by either method be hermetically sealed in the containers, it will dry up under ordinary circumstances. To a large extent this tendency is overcome by the incorporation of 5 per cent. or more of glycerin. If no glycerin is added, the product becomes a hard and dry granular substance as soon as the water dries out of it. This tendency to dry out is what the author of the formula evidently tried to overcome by the addition of glycerin in the formula to which you refer, although on general principles it would be advisable to increase the quantity of glycerin considerably, say to one ounce, the exact quantity, however, to be worked out by a few experiments. Synthetic lilacine has been recommended as a suitable perfume for the average cream of this character, although any desired perfume can be utilized.

Soap and Sulphuric Acid

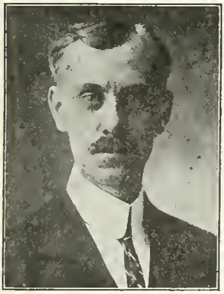
(T. R. G.)—In further reply to your inquiry, which appeared in the July, 1918, "Era," page 186, George N. Case, chemist with Hellwig & Co., Cleveland, Ohio, writes as follows:

"I notice in the Question Box the formula:

Cocoanut oil soap	1 ounce
Sulphuric acid	1½ ounces
Glycerin	1 ounce
Aqua ammonia	1 ounce

"Of course, on the face of it, this cannot be compounded satisfactorily; but I think the formula was probably brought in by one of the common-all-too-compounders. It looks to me like the formula for an antiseptic hand soap. By substituting for the sulphuric acid a certain quantity of sulphuric ether it would change the aspect considerably."

Professional & Trade Associations



Chas. R. Rhodes
Pres. Pa. Ph. A.

S. E. Welfare
Pres. N. C. Ph. A.

Frank J. Dubsky
Pres. Ill. Ph. A.

Mrs. M. M. Whitney
Pres. Mo. Ph. A.

NEW YORK

The dominant feature of the 40th annual meeting of the New York State Pharmaceutical Association, held at the Catskill Mountain House, Otis Summit, on June 25 to 28, was the all-pervading spirit of patriotism which was reflected in the deliberations from beginning to end, "our country first," being the primary thought of every speaker, and every allusion to loyalty bringing forth rounds of applause. Everything moved along according to schedule, the president stating at the opening meeting that the deliberations of each session would start promptly on the minute.

The first session was opened by President Austin, who called on the Rev. C. G. Hazard of Catskill, who offered a prayer, and then delivered an interesting address of welcome. Fred S. Rogers, of Middletown, responded to the address, placing particular stress on the patriotism druggists had exhibited all over the land, notwithstanding the burdens the war had laid upon them. William DuBois, of Catskill, on behalf of the local druggists, gave a short address welcoming the druggists to the Rip Van Winkle country, which was responded to by Dr. William C. Anderson, of Brooklyn.

President's Address

In reviewing the work of the past year President Austin said he regretted the woeful lack of interest on the part of many pharmacists in the State concerning the affairs of the association, but as discouraging as this appeared to be, it should not deter the members from endeavoring to get the pharmacists interested in the association's work. The scarcity of drugs and help had made it very difficult to supply the demand and had developed some bitter experiences; to add to these troubles, a strenuous effort was made last winter to create by legislation a nine hour day. He thought the motive of those who sponsored the legislation was unjust and selfish. This was a matter that should receive the earnest consideration of the membership, which should register its conclusions with the Legislative Committee for guidance in future action.

Commenting upon the junior pharmacist law passed at the last session of the Legislature, he said that an earnest effort should be made to apprentice boys of 17 or 18, and to make the atmosphere of the drug store more inviting. Women also should be encouraged to take up pharmacy and to fit themselves for the work.

Legislation prohibiting drug stores to remain open after a certain hour he did not approve, and the question should be removed from legislative controversy. The question could be left to the local associations which could no doubt arrange to meet the conditions arising in the different communities, either by agreement among the members or by securing the passage of a municipal ordinance. The villages and rural communities did not desire such legislation. George T. Riefflin, as Chairman of the Committee on Membership, and Dr. W. C. Anderson, Arthur S. Wardle and E. J. Kennedy, as members of the Committee on Publicity were complimented for the work they had done for the association during the past year. President Austin recommended the continuation of the Publicity Committee's work.

Affiliation with the N. A. R. D. should be continued, as that organization had qualified as a friend of the retail druggist in its work at Washington during the past year. Prospective legislation in Congress relating to narcotics, revenue measures, etc., made it necessary that druggists should be represented by some one at Washington. The Edmonds bill should be passed and druggists should give it their support.

President Austin made a touching reference in his address to the memory of members who had died during the year, fifteen active and two honorary, Charles Holzhauer, President of the A.Ph.A., and Prof. Joseph P. Remington, of Philadelphia. The awful disaster at Halifax in December last called for relief of a financial character to assist the druggists of that stricken city, and at the suggestion of D. O. Haynes, publisher of The Pharmaceutical Era, Pres. Austin said he had invited the presidents of the six New England State Associations to form a committee to raise funds for such relief. As a result of this effort, the New York and New England Committee for the Relief of Halifax Druggists was organized, with himself as chairman. The scheme was fairly successful and a considerable fund was raised in this way, the details of which are already known to most of our readers.

After referring to the earnest and valuable work that had been done by the Legislative Committee during the past year, and the proposed federation of all national associations relating to pharmaceutical activities as suggested by Dr. A. R. L. Dohme, of Baltimore, President Austin concluded by thanking the association for the honors conferred upon him, as also many members for the assistance they had given him during the past year.

The address was referred to a committee for report.

Secretary's Report

Secretary Dawson presented his annual report in which it was stated that the annual proceedings published last year represented a cost of $530.53, the expense incurred in mailing books to members being $71.28, the cost of mailing being less than that of last year because of the lighter paper used in making up the book. There were 113 new members elected at the last annual meeting, and 73 were dropped from the rolls for various reasons. During the year 12 members died, the total present membership numbering 1347. The expenses of the secretary's office during the year amounted to $1245.49.

Henry B. Smith, Brooklyn, newly-elected president of the New York State Ph. A., appears to be well guarded by a group of competent advisers. He occupies the third chair from the left.

Treasurer's Report

In presenting the report of the treasurer, Mr. Richardson injected a little humor into the proceeding by reading some of the replies he had received from delinquents regarding the payment of dues. The cash on hand at last report amounted to $1444.06; receipts from applications for membership, $410, and dues of members, $2170.75, making a total of $4035.81. Against this were various necessary disbursements practically equalling the receipts.

Report of Board of Pharmacy

Dr. J. H. Rehfuss presented the annual report of the New York State Board of Pharmacy in which it was stated that at the meeting of the board held at Albany in September last, Dr. Jacob H. Rehfuss, of Brooklyn, and Charles B. Sears, of Auburn, were elected respectively president and vice-president of the board. Earlier in the year the Board of Regents had reappointed John Hurley, of Little Falls; Dr. Jacob Diner, and J. Leon Lascoff, of New York, to succeed themselves as members of the Board of Pharmacy. Allusion was made in the report to the long service of the late Dr. A. B. Huested as a member of the board and his active work in all directions for the betterment of pharmacy.

Among the interesting statistics relating to pharmacy in the State were the following: Pharmacies registered, 4767; drug stores registered, 61; storekeeper's licenses issued, 825; apprentice certificates issued, 868; licenses exchanged, 36; number of inspections, 8337; alleged violations reported by inspectors, 376; cases settled, 184; cases in abeyance, 140; cases prosecuted in court and decided in favor of the board, 28; amount of penalties collected, $11,610; number of meetings held by violations committee, 34.

Dr. Rehfuss supplemented the report by explaining the Board's construction of the term "temporary absence," which he said was held to mean not more than two consecutive hours at any one time, and not more than four hours in any one day, the idea being to give the man holding a junior pharmacist's license the privilege of opening up in the morning for an hour and a half or two hours, and then to be on duty for an hour or two during the dinner and supper hour. To prevent junior pharmacists from working at some other trade during the two years they were supposed to be obtaining their practical experience, the board required them to report their places of employment.

At the second session Chairman Arthur S. Wardle submitted the report of the Legislative Committee, which reviewed the legislation that had received attention during the past year, the number of bills introduced in the legislature being less than usual, the most important act passed being that relating to the sale of narcotics. The Committee recommended that no new legislation be proposed unless developments should show the need for such action. It also recommended that the association have codified in clear and concise form the various provisions, order blanks, etc., necessary for a pharmacist to execute in handling narcotics, so that he might be familiar with existing narcotic laws.

Many New Members

At the third session it was announced that 246 new members had joined the association, and that invitations had been received from the Chambers of Commerce of Poughkeepsie, Newburg, and Alexandria Bay asking the association to select their respective places for the annual meeting next year. Decision was not made, however. The proposed federation of pharmaceutical organizations and means of inducing young men and women to take up pharmacy were discussed, while the Edmonds bill and the narcotic law were approved. The committee on credentials also reported and delegates from various associations were introduced and made short addresses.

At Wednesday morning's session a spirited discussion took place as to the position the association should take relative to shortening the hours of labor in drug stores. The consensus of opinion seemed to favor that something should be done, but it was not settled whether it should be done by legislation compelling all drug stores to close at a stipulated early hour (10 P. M., except on a Saturday when the closing hour should be 11 P.M.), or by allowing stores to operate as they now do and permitting the clerk to have more time off. The proposition to enact a special law regulating the hours that drug stores should remain open in New York City aroused considerable opposition. Finally, the whole matter was left in the hands of the Legislative Committee with the recommendation that it endeavor to secure legislation that will make it compulsory for all drug stores to close at the hours stipulated above.

At the conclusion of the session the association then proceeded to the nomination of pharmacists to be recommended for appointment to membership on the board of pharmacy, the names selected being as follows: George C. Diekman, Jacob H. Rehfuss, Curt P. Wimmer, Diodata Villamena, Peter Diamond, Henry B. Smith, William Mansfield, C. W. Hyde and Richard A. Austin.

Papers Read and Discussed

The afternoon session was given over to the reading of papers, the program being in charge of Dr. William

Mansfield, chairman of the Committee on Pharmacy and Queries. Among the papers read were the following: Determination of Glycerin in Mixture of Rhubarb and Soda, by H. V. Arny and P. Breivogel; Qualitative and Quantitative Tests for Glycerin, by Dr. Joseph Kahn; War Formulas, by J. P. Snyder; Regulation of Diagnostic Laboratories and related tests, F. E. Niece; Scientific Pricing, by Robert Lampa; Increasing our Profits, by W. W. Figgis, and Cresol Solutions, by F. Barnstead. In the contest for the three prizes awarded to the authors of the best papers, Dr. Joseph Kahn was given first place, Dr. F. E. Niece, second, and W. W. Figgis, third prize.

J. Leon Lascoff, of New York, read a paper entitled "An Appeal—A Mile of Dimes," which outlined a plan to provide a New York State Pharmaceutical Association ambulance to be sent to the battle lines. Mr. Lascoff showed himself to be very earnest in this matter, and a liberal sum was collected toward the fund (Mr. Lascoff's paper appears elsewhere in this issue.

The Committee on President's Address reported in favor of approving the recommendation that the question of shorter hours and early closing should be regarded as local issues to be solved by mutual agreement among the druggists themselves and should be removed from legislative controversy. Should legislation be introduced by interests outside of the drug business, requiring all classes of business to observe definite closing hours, the Legislative Committee should take action when it becomes satisfied that the general sentiment of the drug trade would favor such a movement.

The recommendation that an effort be made by members to stimulate the study of pharmacy by apprentices at an early age was approved, with the additional suggestion that a committee be appointed wherever possible to arrange for a member of the association to appear personally before high schools and colleges and emphasize to such young men and women the advantages of adopting pharmacy as a vocation. The Committee also approved the recommendation that affiliation of the association with the N. A. R. D. be continued and expressed satisfaction with the manner in which President Austin had carried forward the work for the relief of Halifax druggists, and recommended that he be reimbursed for any personal expenses borne by him in connection therewith.

At Thursday morning's session the following officers were elected: President, Henry B. Smith, Brooklyn; 1st vice-president, Robert S. Lehman, New York; 2nd vice-president, O. B. Chapman, Richfield Springs; 3rd vice-president, Walter B. Tongue, Poughkeepsie; secretary, E. S. Dawson, Syracuse; treasurer, Frank Richardson, Cambridge; executive committee, Charles N. Lehman, Tottenville; Pincus Herz, New York, and Herbert G. Wright, Syracuse.

The following Auditing Fund Committee was appointed: J. Leon Lascoff, New York; C. F. Fisher, Brooklyn; H. G. Wright, Syracuse; A. S. Wardle, Hudson, and C. S. Whitticar, Buffalo.

Routine matters occupied the attention of the members at the final session held on Friday morning, among them being the discussions on a number of reports submitted by various committees. The proposition to amend the by-laws relating to the admission of members into the association was defeated.

In a social way the program included dancing and card games, the "big" affair being the entertainment given by the Traveling Men's Auxiliary on Wednesday evening. Next day there was a game of ball between teams representing the traveling men and the members of the association, the latter winning by a score of 23 to 19.

PENNSYLVANIA

The 41st annual convention of the Pennsylvania State Pharmaceutical Association held at the Hotel Stirling, Wilkes-Barre, on June 25 to 27, was one of the most important meetings in the history of the organization. Patriotism was the key-note in all speeches; legislation perfecting war activities and medical departments was urged, and various recommendations were made that will greatly improve the welfare and health of the state if followed. Among the most important measures approved were the Edmonds bill providing for a pharmaceutical corps in the army; legislation to curtail the sale of proprietary remedies for venereal diseases, and the adoption of a twelve-hour day schedule for retail stores during the week, and five hours on Sundays. There were nearly two hundred delegates present.

The first day of the convention was given over to the presentation of reports on different matters of interest to those engaged in the drug trade and the business reports of the various committees. Telegrams of greeting were sent to Indiana, Iowa, Michigan, New York and Wisconsin State associations which were convening at the same time.

A suggestion was made that next year a tri-State convention be held including the States of Pennsylvania, New York and New Jersey. It was deferred for consideration at a later meeting.

An interesting report presented was that of the committee of trade interests given by B. E. Pritchard, chairman, who told of the conditions which produced the increased cost of different drugs during the war and laid the blame on the difficulty in securing shipments from different points. He said that owing to the disturbed conditions in Russia and Eastern European countries the products from those nations are forwarded very irregularly, which also is a principal factor in the advance of prices on certain medicines. Mr. Pritchard deplored the difficulty in procuring adequate help for the drug industry, declaring that some method must be instituted whereby the shortage of help may be combatted. He advised the druggists to take all these things into consideration in pricing their goods.

In attendance at the Spring Lake meeting of the New Jersey Ph. A. recently; Sitting, Prof. Curt P. Wimmer, Secretary Jeannot Hostmann; ladies, Miss Elsie Bauer, Mrs. Jeannot Hostmann, Mrs. R. S. Lehman. Standing, Hugo Kantrowitz, Prof. H. V. Arny, Hugo H. Schaefer, R. S. Lehman, George M. Beringer, and Prof. Otto Raubenheimer.

The formal opening of the convention took place on the evening of June 25. Prayer was offered by Rev. Dr. A. E. Piper, pastor of the First Methodist Episcopal Church. Daniel L. Hart welcomed the delegates to Wilkes-Barre in a felicitous address, which was responded to by Prof. Charles LaWall, of Philadelphia. Henry L. Merritt, of Plains, ex-president of the N. A. R. D., offered greetings from the local druggists.

Recommendations vital to the druggist, and some which bore on national problems were embodied in the annual address of the president, William H. Knoepfel of Scranton. He opened with a vigorous denunciation of all business conducted on a mail order basis and said that he favored the indorsement of publishers and publications which refuse to accept mail order advertising. The reason for his unfavorable attitude on this matter, he explained, was that a business conducted on such a plan tends to draw away patronage from the home concerns. He recommended that druggists be granted shorter hours, declaring that if stores remained open from 8 A. M. until 8 P. M., the public would have plenty of time to make their purchases; that honorary membership should be conferred upon Congressman George W. Edmonds, who introduced the bill providing for a pharmaceutical corps in the army, and advised the association to go on record as indorsing the action of the State Board of Health and the national government in the issuing of propaganda to prevent the spread of venereal diseases. Mr. Knoepfel closed with a strong plea to the druggists to boost the sale of War Savings Stamps whenever possible.

The committee on the time and place of the next convention reported Forest Park as the place and recommended that the fourth week in June, 1919, be adopted as the time. It is possible that a tri-State convention, including the States of Pennsylvania, New York and New Jersey, will be held next year, and if this plan be adopted the executive committee was empowered to change the place of meeting.

The first recommendation embodied in the report of the legislative committee, given by Charles F. Kramer, was that an active propaganda campaign should be inaugurated to secure the passage of the Edmonds bill designed to provide a pharmaceutical corps in the army. Another point brought out was that the drug and narcotic laws now on the statute books of Pennsylvania are sufficient to protect the public health and that no further legislation is needed. Incoming legislative members should be instructed to work for an appropriation of $10,000 to carry on the work of the board of pharmacy in enforcing the laws now on the statute books. To enforce these laws investigators must be engaged and their expenses paid.

Dr. L. L. Walton of Williamsport, secretary of the State Board of Pharmacy, presented statistics showing that of the number of candidates for registration in the State during the year about 60 per cent. passed the required examinations. Dr. Walton deplored the fact that there are not sufficient funds to carry on the work of the board and expressed the hope that at the next meeting of the legislature, a sum will be appropriated adequate for the needs of the board. To meet expenses about $20,000 is needed.

An excellent quality of drugs and chemicals is furnished by American manufacturers, according to J. G. Roberts, who reported on the drug market. Dr. E. G. Eberle, of Philadelphia, editor of the Journal of the A. Ph. A., read a paper on "Loyalty to the Country and Pharmacy" and Dr. F. E. Stewart spoke on "Patents and Trade Marks", and advocated such a revision of the laws as would prevent the formation of monopolies on various chemicals like those enjoyed by German and other concerns. He also reported on the activities of the war defense organization.

The following officers were elected:—President, C. R. Rhoades, Hyndman; first vice-president, Ambrose Hunsberger, Philadelphia; second vice-president, James F. Kane, Pittston; treasurer, F. H. E. Gleim, Lebanon; secretary, Robert P. Fischelis, Philadelphia; assistant secretary, Louis Saalbach. Members of the executive committee: W. H. Knoepfel, Scranton; C. Lyston Jones, Easton.

Among the recommendations adopted by the association were those relating to the prohibition of the sale of venereal remedies; indorsing the Edmonds bill; continuing affiliation with the N. A. R. D.; approving a 12-hour day schedule for retail drug stores and five hours on Sunday; conferring honorary membership on Congressman George Edmonds; approving the general plan proposed for the federation of pharmaceutical associations, and re-affirming the support of the association to the Stephens price maintenance bill now pending in Congress.

A memorial service was held for eleven members who had died since the last meeting. The association went on record as opposing legislation for the establishment of health insurance and formula disclosure.

The prize for the most valuable paper for retail druggists was awarded to Edward T. Hahn for his paper "Practical Notes on Salesmanship for the Retail Druggist." The prize of $20 in gold for the best paper presented last year was awarded to Mr. and Mrs. J. C. Peacock. For the best essays read at this year's meeting the prizes went to the following: Mrs. Adolph Schmitt, McKeesport; Mrs. David McMurtrie, Altoona; Mrs. J. J. Calver, Washington, and Miss Leonette Rehfuss, Philadelphia.

The entertainment features were strongly in evidence, including pleasure rides, card parties, dances, informal dinners, entertainment and banquet. In these social activities the Travelers' Association, otherwise known as the "Yellow Dogs of America," took the initiative and the entertainment furnished by them will long be remembered by the visiting delegates.

FLORIDA

At the annual meeting of the Florida Pharmaceutical Association held at Tampa, resolutions endorsing the bill for the establishment of a Pharmaceutical corps in the Army were adopted. The following officers were elected; President, Marshall Bize, Ybor City; 1st vice-president, J. S. Jewett, Lakeland; 2nd vice-president, R. N. Chelf, Brooksville; 3rd vice-president, Harry Landers, Avon Park; secretary-treasurer, J. H. Haughton, Palatka; executive committee, W. D. Jones, Jacksonville, W. A. Rawls, Pensacola, and M. M. Taylor, Tampa.

GEORGIA

At the annual meeting of the Georgia Pharmaceutical Association held at Tybee Island, a resolution was adopted favoring the passage of a law that would prohibit the sale of proprietary medicines containing more alcohol than is necessary to preserve the vegetable constituents of such remedies. The organization also went on record as favoring the passage of the Edmonds bill for the establishment of a pharmaceutical corps in the army, a committee consisting of Dr. George F. Payne, T. A. Marshall and Lynn Fort being appointed to work in support of the measure. In a spirited address, Herman C. Shuptrine arraigned the American Medical Association for endeavoring to secure legislation which, he said, would benefit that organization only.

The association held a short memorial service for the late Max Morris, of Macon, who had been a prominent member of the organization, and who was at the time of his death a member of the State Board of Pharmacy. To fill the vacancy on the board the following list of names was recommended to Governor Hugh M. Dorsey for the selection of an appointee:

H. D. Bell, Albany; L. H. Odum, Blackshear; H. R. Palmer, Athens; W. L. Meadows, Columbus, and Brevard Cooley, Sandersville.

The following officers were elected: President, T. F. Burbank, Cedartown; 1st vice-president, W. T. Knight, Savannah; 2nd vice-president, E. C. Wise, Atlanta; 3rd vice-president, R. E. Perry, Sylvania; Secretary, T. A. Cheatham, Atlanta; treasurer, T. A. Marshall, Atlanta.

By unanimous resolution, Tybee was selected as the permanent meeting place for all future conventions of the association.

NORTH CAROLINA

The principal speakers at the 39th annual meeting of the North Carolina Pharmaceutical Association held in Raleigh beginning June 21, were Dr. Henry F. Hynson, of Baltimore, who discussed the detail problems in commercial pharmacy; Dr. Kebler, of the Food Administration, who spoke on the present sugar shortage as it related to druggists, and C. D. Bradham, of the Eastern District Exemption Board, who interpreted the various rulings for deferred classification in Army service.

Group of prominent New York State pharmacists at Catskill Mountain House. Retiring president Richard A. Austin, sitting in the front row, second from the left, is one of the active workers in the association.

Richard Busbee, of Raleigh, addressed the convention on War Savings Stamps, and at the conclusion of his talk a subscription was taken to buy these stamps for the association, the treasurer purchasing $200 worth. The association pledged itself as an organization and individually through its members to expend every effort and to work for the passage of the Edmonds bill giving recognition to pharmacists and increased efficiency to the Medical Department of the Army. The association also favored the policy of remitting the annual renewal license fee to those druggists now in the service, and the next General Assembly will be memorialized to permit such a course. It also recorded itself in favor of Sunday closing hours for drug stores and that women should be encouraged to take up pharmacy as a life work.

Important papers were read at the meeting by C. B. Miller, P. A. Lee, Dr. Fred B. Kilmer, of New Jersey; Prof. E. V. Howell, C. D. Bradham and J. G. Beard. Mr. Beard was awarded first prize of $10, Mr. Lee second prize, a Pharmacopoeia, and Mr. Miller third prize, consisting of merchandise.

The following officers were elected: President, S. E. Welfare, Winston-Salem; vice-presidents, G. R. Pilkington, Pittsboro; E. E. Missildine, Tryon, and I. W. Rose, Rocky Mount; secretary-treasurer, J. G. Beard, Chapel Hill; member of the board of pharmacy, F. W. Hancock, Oxford; local secretary, R. R. Bellamy. Wilmington was selected as the place of meeting, the date to be decided later.

The meeting was successful in every respect, 185 delegates being in attendance, and forty new members added to the roll of membership. The entertainment features consisted of a barbecue and athletic contests given by the Traveling Men's Auxiliary, a bridge party for the ladies, a reception and dance at the Country Club, a buffet luncheon in the Chamber of Commerce, and an automobile ride through and around the city. All the prizes won at the barbecue, amounting to $200 in value, were donated to the local canteen committee of Raleigh. The association feels very grateful to Local Secretary H. T. Hicks and the druggists of Raleigh for the hospitality shown and the many courtesies received during the meeting.

INDIANA

At the thirty-seventh annual meeting of the Indiana Pharmaceutical Association held at Purdue University, Lafayette, the following officers were elected: President, E. W. Stucky, Indianapolis; 1st vice-president, William Oren, Indianapolis; 2nd vice-president, J. A. Aubry, Hammond; 3rd vice-president, Charles Haupt, Terre Haute; secretary, William F. Werner, Indianapolis; treasurer, Frank H. Carter, Indianapolis; members of the executive committee, B. M. Keene, Indianapolis, Bruno Knoefel, New Albany, and Roy E. Tilford, Martinsville.

The program included the annual address by retiring president W. H. Rudder, of Salem, addresses by Dr. Winthrop E. Stone, president of Purdue University, and Dr. Stanley Coulter, dean of the School of Science of the same institution. Papers were read by J. D. Aurenz, of Lafayette, on "Show Card Writing;" Dr. F. B. Kilmer, of New Brunswick, N. J., "A Greater Pharmacy;" H. S. Noel, of Indianapolis, "Inventories;" Prof. W. B. Day, of Chicago, "The State Association in War Time;" and Charles Genolin, of Nashville, Ind., "The Slacker." Prof. W. F. Gidley, discussed "Biological Products," and Prof. C. B. Jordan demonstrated methods of pharmaceutical assaying. E. R. Niles, of Indianapolis, spoke on "The Education of the Pharmacist."

The entertainment program included a visit to the departments of pharmacy and chemistry of Purdue University, and a trip to Camp Purdue, where the Purdue training detachment of the National Army was inspected.

MICHIGAN

At the 36th annual meeting of the Michigan Pharmaceutical Association, held at the Hotel Statler, Detroit, on June 25-27, the organization went on record in favor of the passage of the Edmonds bill for the establishment of a pharmaceutical corps in the U. S. Army, and adopted resolutions directing the delegates of the association to the coming convention of the N. A. R. D. in New Orleans to do all in their power to bring about the election of J. H. Webster, of Detroit, as a member of the N. A. R. D. executive committee.

In his annual address President P. A. Snowman, of Lapeer, recommended that the annual dues of the association be raised to $3 per year, and that an attorney be employed to direct the legislative work of the association at Lansing during the session of the legislature. Secretary Frank J. Wheaton, of Jackson, reported the addition of 155 new members since the last annual meeting and about $600 in the treasury.

Among the speakers were Prof. Henry Kraemer, of the University of Michigan, who spoke on the "Future Outlook for Pharmacy;" W. H. Hall, of Detroit, who discussed the changing of standard formulas to conserve needed supplies for the prosecution of the war; Henry Morris, of Lansing, "Is Your Store Your Partner?" and Harry B. Mason, "The Vital Question of Profits." Leo Pryor, of the State Food and Drug Department, Lansing, made a plea for druggists to send in their reports monthly of the quantity of liquor sold and the quantity of alcohol used in manufacturing, as required by the new prohibition law.

The following officers were elected: President, J. H. Webster, Detroit; 1st vice-president, Lee Chandler, Charlotte; 2nd vice-president, P. C. Brooks, Houghton; secretary, Frank J. Wheaton, Jackson (re-elected); treasurer, Francis B. Drolet, Kalamazoo; members of the executive committee, George H. Grommet, Detroit, and E. W. Austin, Midland.

The Michigan Pharmaceutical Travelers' Association, which held its meeting at the same time elected W. E. Collins as president, Leo Caro, F. E. Wicks and J. J. Wells as vice-presidents, and W. S. Lawton secretary-treasurer. The sum of $200 was voted to the Red Cross and a telegram was authorized endorsing President Wilson and the administration in connection with the conduct of the war.

CONNECTICUT

Considering the scarcity of help, the attendance at the 42nd annual meeting of the Connecticut Pharmaceutical Association, held at the Hotel Shoreham, near New Haven, on June 26 and 27, was exceptionally large, while the discussions were closely followed and the subjects interesting. Among the delegates of other organizations in attendance were James F. Finneran, of the N. A. R. D.; Dean Theodore J. Bradley, of the Massachusetts C. P.; Albert E. Lerche, representing the Massachusetts Ph. A., and Prof. Curt P. Wimmer, of the New York C. P.; all made addresses. The following officers were elected; President, Carl S. Ramsay, New Britain (re-elected); 1st vice-president, Charles T. Hull, New Haven; 2nd vice-president, S. Nelson, Hartford; secretary-treasurer, P. J. Garvin, Bethel (re-elected).

Nominations for membership on the Board of Pharmacy, from which one is to be selected: Harrison C. Prudy, Derby; M. Frank Hope, New Haven; Henry F. Ruby, Hartford; Knud J. Damtoft, Bridgeport; and Harold Glendening, Norwalk.

The Traveling Men's Auxiliary elected the following officers: President, B. F. Green, New York; vice-president, C. A. Wurtz, Hartford; secretary-treasurer, R. I. Isbell, New Haven.

NEW HAMPSHIRE

The New Hampshire Pharmaceutical Association met at Newcastle on June 27 and 28 and elected the following officers for the ensuing year: President, James L. Dow, Lancaster; 1st vice-president, Joseph LeBlanc, Manchester; 2nd vice-president, A. F. Clough, Laconia; secretary, Eugene Sullivan, Concord; treasurer, S. Howard Bell, Derry; auditor, John H. Marshall, Manchester.

NEBRASKA

At the thirty-seventh annual meeting of the Nebraska Pharmaceutical Association, held at Lincoln in June, resolutions were adopted favoring higher standards for pharmacists in the State, the druggists pledging themselves to encourage a four year course in pharmacy believing that "two years' time is sufficient to obtain fundamental training in pharmacy, and that a minimum of a two years' course should be required as a pre-requisite for examination before the state board examiners and reciprocal registration." A resolution was also adopted to the effect that in addition to the other regulations on the statutes, candidates for appointment to the state board of examiners shall be graduates of one of the recognized schools of pharmacy.

In his annual address President Niels Mikkelsen said that personal interests, community wants, State desires and the every day needs of the nation must become subservient to the one great task of winning the war. More than 100 young men in the pharmaceutical ranks of Nebraska enlisted voluntarily to do their share in winning this great contest. Stronger team work in pharmacy is necessary to bring pharmacy schools and colleges up to the standard of the leading universities, and it is necessary that pharmacists have the training that such institutions can give if they are to meet the Government requirements for commissions in the medical service as proposed in the various bills that have been presented to Congress. In discussing the drug clerk shortage, Mr. Mikkelsen said, there are more drug stores than are required. With the constant drain of men from the ranks of pharmacy, women will be one of the chief assets in the solution of the help problem, and they should be encouraged to take up the study of pharmacy as a vocation. He recommended that the association establish a monthly publication as the official organ of the organization; that a resolution condemning the sale of all sex remedies except on prescription be passed; that delegates attending meetings of national associations favor the movement to consolidate and coordinate pharmacy in a way that will increase its usefulness, and that the two year course in pharmacy be abolished.

One of the features of the meeting was an address on "The Potash Industry as the Druggist Should See It," by John O'Brien, of Omaha. Among other things, he said, that after war had been declared by America, Nebraska came to the rescue and now furnishes 80 per cent. of all the potash that is used here at present. This is of the highest and best grade in the country and fully equals that formerly obtained from Germany. The remainder of the potash used is furnished by Colorado, Utah, California and New Jersey, but this is much below the quality furnished by Nebraska. That obtained from the lakes in California contains about 2 per cent. of borax which renders it practically unfit for fertilizer and makes it really detrimental to the soil.

The following officers were elected: President, J. Earl Harper, Clearwater; 1st vice-president, Miss St. Martin, Wahoo; 2nd vice-president, J. W. Boswell, Fairbury; 3rd vice-president, Miss Elsie Day, Lincoln; 4th vice-president, A. E. Carlson, Danybrook; 5th vice-president, Niel Dodge, Hickman; treasurer, D. D. Adams, Nehawka; secretary, J. G. McBride, University Place; nominees for the State Board of Examiners, Niels Mikkelsen, Kenesaw, G. H. Brooke, Fairbury, and G. F. Stelow, Long Pine.

York was selected as the place of meeting next year.

ILLINOIS

The thirty-ninth annual meeting of the Illinois Pharmaceutical Association held in LaSalle, June 18 to 21, was largely attended, the total registration being 311. President Byron Armstrong, of Jacksonville, in his annual address urged that the membership of the association should be built up so that it would fully represent the pharmacists of the State, discussed the relations of the pharmacists to the new organized department of education and registration, and recommended that the association's monthly journal should be continued; that an active campaign against itinerant vending of medicines by wagonmen should be undertaken, and urged the co-operation of the State and national pharmaceutical associations by recommending the proposed federation plan set forth by President Dohme of the A. Ph. A. He also recommended that the efforts of pharmacists to secure the passage of the Edmonds bill be continued. Practically all of the recommendations were endorsed by the committee to which the address was referred.

Samuel C. Henry, secretary of the N. A. R. D., was elected an honorary member of the association, and the contract with "The C. R. D. A. News" for the monthly I. Ph. A. issue was renewed for another year. Affiliation with the N. A. R. D. was continued, and an appropriation of $100 was made toward the expenses of the A. Ph. A. convention to be held in Chicago in August. Members of the association serving in the Army or Navy will be carried on the rolls without payment of dues during the period of the war.

The secretary reported 104 new members, the total membership being 1247. Membership campaign prizes were awarded to H. J. Holthoefer, of Chicago, and J. F. Shreve, of Jacksonville. The treasurer's report showed receipts for the year to be $2124, and expenditures, $2077.09. Funds at the present time amount to $3140.02, of which $700 is invested in bonds of the first Liberty Loan.

Following the usual committee reports, letters of greetings were read from Mrs. Emma Gary Wallace, secretary of the Woman's Organization, N. A. R. D., Prof. Eberle, and others. President Dohme presented the greetings of the A. Ph. A. and Secretary Henry those of the N. A. R. D. H. S. Noel made an excellent talk on Drug Store Economics, and President Dohme of the A. Ph. A. outlined his plan for the federation of pharmaceutical organizations. Francis W. Shepardson, director of the State department of registration and education presented a clear and explicit statement of the relations between the civil administrative code and the pharmacy practice act. The address was well received, and when the speaker concluded a special committee was appointed to take up with him the adjustment of relations between the association and the department. In his address, S. C. Henry dealt chiefly with national legislative affairs. A resolution expressing the willingness of the association to cooperate with the national authorities in combating the spread of venereal diseases was adopted, as also were resolutions endorsing the Edmonds and Stephens bills, and expressing the loyalty of the association and its eagerness to serve the State and Nation in every way possible.

The following officers were elected: President, Frank J. Dubsky, Chicago; 1st vice-president, John C. Wheatcroft, Grayville; 2nd vice-president, W. J. Clancy, LaSalle; 3rd vice-president, Ad Umenhofer, Chicago; secretary, W. B. Day, Chicago; treasurer, Chris Garver, Bloomington. Peoria was selected as the place, and June 17 to 20, 1919, as the time for holding the next annual meeting.

The Illinois Pharmaceutical Travelers' Association elected the following officers: President, R. A. Whidden; 1st vice-president, T. W. Stock; 2nd vice-president, H. I. Carnahan; 3rd vice-president, L. J. Bertoli; secretary-treasurer, F. H. Elsner; chairman of the council, George H. Leonard.

The entertainment program included the president's reception and dance; a boat ride on the Illinois river, a visit to the new State Park at Starved Rock, and a vaudeville show and dancing on "Travelers' Night."

The druggists of South Dakota have decided not to have their annual convention this summer, giving as their reasons, existing war conditions, shortage of clerks and a patriotic desire to do all in their power to serve and conserve their country. It was voted to retain the same officers and committees, and to hold a 1919 convention, if feasible, at Lead in August of next year.

DENY PRICES WERE FIXED BY N. W. D. A.

Members of the Association Declare Acts Charged by Federal Trade Commission Never Came to Their Knowledge—Belief that Complaint Is Due to Someone with a Grievance

In regard to the complaint of the Federal Trade Commission, against the National Wholesale Druggists' Association, Charles P. Barton vice-president of the Robinson-Pettet Co., Louisville, Ky., has given as his personal opinion that the Trade Commission would find it difficult to prove the charges. He said that his firm had been a member of the association for a number of years, although no member of the firm holds an office in the association, and if there had ever been any attempt whatever to fix prices or in any way to discriminate, it had never come to his knowledge.

Mr. Barton said that the gentlemen named in the charge were among the most prominent business men in the communities in which they are in business, and that he could not believe they would be guilty of price fixing or in any way connected with a combination for the restraint of trade, and that they will have little trouble in proving themselves and the association innocent of the charges.

M. C. Peter, president of the Peter-Neat-Richardson Co., says it is his opinion that the charges are somewhat similar to those recently made against a number of varnish manufacturing concerns throughout the country and are more in the nature of an investigation than anything else. Mr. Peter declares the charges are unjust and says if the association had ever been guilty of the things charged in the complaint it had never come to his knowledge. He feels that the legal talent engaged by the association will have no trouble in vindicating the association.

Other wholesalers of Louisville bear out the assertions of Messrs. Barton and Peter. Locally it is the opinion of the drug trade that the Trade Commission has merely started one of its numerous investigations, which are generally started by some person who has a grievance and uses the Trade Commission to reach certain ends. In many of these cases the investigations have failed to prove anything.

To our representative, H. H. Robinson, of the H. B. Gilpin Company, wholesale druggists of Baltimore, who has been vice-president of the National Association and has held other positions, said with regard to the suit filed by the Government that the allegations set forth in the complaint were news to him. Although in his official capacity he had come into close touch with the other officers and presumably was in a position to learn all about the organization's affairs, he did not know of anything in its methods or practices which might deservedly bring it into conflict with the law.

W. A. Sailer, of Sharp & Dohme, said that while his company held membership in the association, it was a manufacturer of pharmaceuticals and did not take any prominent part in the activities of the organization, holding the view that this was outside of its business and belonged in the realm of the wholesalers in the stricter sense of the word. As far as his company was concerned, it had always scrupulously treated all buyers alike, holding to certain principles which were wholly in keeping with the provisions of the statute against undue restraint in trade. Sharp & Dohme, Mr. Sailer said, had no knowledge of the inner workings of the association, if there were any; and were not in a position to express any opinion as to the merits or demerits of the judicial proceedings.

The Progress of Pharmacy

Thorium Sodio-Citrate—

The double citrate of thorium and sodium, being opaque to the X-rays while soluble in water, is used in solution for pyelography. The solution is prepared as follows: Thorium nitrate, 10 grams, is dissolved in distilled water and heated on the waterbath; 30 Cc. of sodium citrate solution (1:2) are then added slowly with constant agitation. The precipitate formed at first is redissolved in the excess of the alkali citrate solution. The liquid is then exactly neutralized with normal sodium hydroxide solution, and the volume made up to 100 Cc. with water. After filtration and sterilization by boiling, the liquid is ready for use. A stronger solution is made in the same way, using the following quantities; Thorium nitrate, 1 gram; sodium citrate, 22.5 grams; water to make 100 Cc. (*Pharm. Journ.*).

Iodide of Starch for Infection of Wounds—

An item appearing in medical exchanges names the iodide of starch as one of the new and promising remedies for the treatment of infected wounds. It is said to act as a clean, dry, absorbent dressing and at the same time, gradually liberates enough iodine to be an efficient antiseptic. A mixture containing one part of iodine to 50,000 parts of starch when applied will destroy the common streptococci and other varieties of germs, and in this form has been successfully employed for dressing wounds at the battle front. It is also claimed that a solution of iodide of starch containing 0.50 gram of iodine in each liter can be employed as an irrigating solution for wounds.

Raffia Wax—

Consul James G. Carter in a report to the Bureau of Foreign and Domestic Commerce states that the raffia wax industry in Madagascar is yet undeveloped, although considerable of this material per year could be obtained if offers were sufficiently interesting to induce the Indian traders to occupy themselves with the business. The product resembles carnauba wax, and is obtained from the *Raphia Ruffia*, a palm indigenous to Madagascar. The wax forms a whitish layer on the under side of the leaves in the form of a dust which is easily detached as a fine powder. This is boiled with water, the earthy matter settling out, and the crude wax is skimmed off and allowed to solidify. When cold it becomes hard and somewhat brittle. It has a sp. gr. of 0.950, and melts at 82°. It is soluble in chloroform, ether, petroleum ether, benzene, carbon bisulphide and acetone. It dissolves in boiling alcohol, but separates on cooling.

Manufacture of Industrial Alcohol in Australia—

A Sydney chemist has been experimenting with the Zamia palm, *Macrozamia spiralis*, popularly known as the Burrawong palm, found growing in great profusion along the sea coast of New South Wales, as a possible source of industrial alcohol. As described in *Commerce Reports*, the Zamia palm contains 25 per cent. of starch, 25 per cent. of fiber, and 50 per cent. of water. The starch is converted into sugar by a simple method; two per cent. of bran, or rye, or malt is soaked in cold water from three to five hours. The root is ground to fine powder and boiled to bring about gelatination. Then the temperature is reduced to 140° F., and the cold solution from the bran, rye, or green malt is added. Within half an hour the starch is converted into sugar. The solution is then cooled to 90° F. when there is added a pure culture of yeast, which effects fermentation in less than 48 hours. The whole mass is put into a simple still and yields alcohol to the extent of 45 gallons per ton of material. The chemist who discovered the process of manufacture states that allowing between 10 and 15 shillings per ton for wages in collecting the roots, the material would cost about 4½ pence per gallon of proof spirit, or 9 pence for absolute alcohol.

Amount of Ash and Potash from a Ton of Wood—

Vegetable ash in general contains many chemical constituents, such as carbonates, phosphates, sulphates, silicates, chlorides, bromide of sodium, calcium, magnesium and potassium. From a fertilizing standpoint the potash is of primary importance, the following figures showing the amounts of ash and potash that remain as the result of burning 1 ton of any of the different woods and plants mentioned below:

	Ash pounds	Potash pounds
Spruce	7.50	1.00
Beech	12.78	2.80
Ash	26.90	1.63
Oak	29.76	3.31
Elm	55.11	8.60
Willow	61.73	6.28
Grapevine	74.95	12.12
Fern (or bracken)	80.25	9.37
Wormwood plant	214.73	160.93
Fumaria plant	482.81	174.16

On a general average there is between 6 and 10 per cent. of potash in wood ash, and the use of the latter as a fertilizer by the farmer would effect for him a small economy. According to Bottinger, 21.27 per cent. of wood ash is soluble and is composed of these salts in the proportions indicated; carbonate of potassium, 15.40 per cent.; sulphate of potassium, 2.27 per cent.; carbonate of sodium, 3.40 per cent.; and chloride of sodium, 0.20 per cent.

NEW REMEDIES OF 1917*

Arsenphenolamine Hydrochloride is the name adopted officially by the American Medical Association for salvarsan.

Apothesine is a local anesthetic, described as cynnamyl diethylaminopropinol hydrochloride. It is used as a 0.5 per cent. solution in 0.4 per cent. sodium chloride solution with adrenalin, and is said to be non-toxic.

Anusan is the name given to certain proprietary remedies for the treatment of hemorrhoids and rectal affections generally.

Cargentos is a colloidal silver oxide, recommended as a non-irritating antiseptic.

Citresia is magnesium acid citrate, a white powder having an acid taste.

Diemenal is a French solution of colloidal manganese used in the treatment of malaria.

Glycarsenobenzol is a preparation for intramuscular injection in syphilis; it contains in each Cc.: novarsenobenzol, 0.2 gram; guaiacol, 0.1 gram; stovaine, 0.1 gram.

Iosorbol is a powder containing 10 per cent. of pure iodine in a basis of absorbol, an absorbent vegetable powder.

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*Pharmaceutical Journal

New Books for Pharmacists

CHEMISTRY OF FOOD AND NUTRITION. By Henry C. Sherman, Ph.D., professor in Columbia University. Second edition, rewritten and enlarged. 12 mo., 13 + 545 pages, cloth, $2. New York, The Macmillan Company.

In this book food is chiefly considered in its relation to nutrition, and in this direction it will appeal to the student and general reader who appreciate the importance of food and nutrition as factors in health. As the author states the case, to consider intelligently the nutritive requirements of the body as regards the substances of which it is composed, it is necessary first to know whether the fuel requirements (the requirements of the energy metabolism) have been fully met.

Recent investigations have developed the fact that food of sufficient energy value and containing ample amounts of each of the chemical elements known to be essential to the body is not necessarily adequate to meet all the requirements of nutrition, and thus it appears, the author states, that certain substances occurring in natural foods, but not yet chemically identified, are also to be included among the nutritive requirements of the body and therefore among the factors which determine the nutritive values of foods. At present these unidentified substances are designated as "vitamines" or as "fat soluble A" and "water soluble B." The essentials of a chemically adequate food supply are thus summarized; 1, sufficient of the organic nutrients in digestible forms to yield the needed energy; 2, protein, sufficient in amount and appropriate in kind; 3, adequate amounts and proper proportions of the various ash constituents or inorganic foodstuffs; and 4, sufficient of each of the two unidentified "vitamine" factors, the "fat soluble A" and the "water soluble B."

Many interesting items of information appear throughout the volume. In normal years, the sum annually spent for food in the United States is in the neighborhood of $7,000,000, which implies an allowance of approximately one dollar per day for food for the "normal" family of five, or 20 cents per capita per day. Notwithstanding the fluctuations of prices under war conditions, the economic relationships discussed by the author are but little disturbed by a general raising or lowering of the level of prices. Issued at a time when the subject of food conservation is of the greatest importance, this book should appeal to those looking for information.

LABORATORY GUIDE OF EXPERIMENTAL PHARMACOLOGY. By Charles W. Edmunds, A.B. M.D., professor of materia medica and therapeutics in the University of Michigan, and Arthur R. Cushny, A.M., M.D., LL.D., F.R.S., professor of pharmacology in the University College, London; and late professor of materia medica and therapeutics in the University of Michigan. 8 vo., 331 pages, cloth, $2. Ann Arbor, Mich. George Wahr.

This book is an amplification of notes first put in permanent form by the authors for the use of students in the pharmacological laboratory of the University of Michigan more than a decade ago, the methods employed being formulated with the object of training the student and impressing upon him the fact that the study of drugs is to be approached in the same objective way as other branches of medicine. The outline of experiments is simple and can easily be carried out by the average medical student in any laboratory equipped for the purpose.

The first section of the book is devoted to pharmaceutical work for medical students, but which, the authors state, may be omitted in those schools in which such students are given a special course in pharmacy. Thus, all physicians early in their work, should have a working knowledge of the chemistry of drugs, percolation, the preparation of powders, pills, cachets, emulsions, etc., else they cannot intelligently prescribe the best form of administration. The chief weight of the course is laid on the experimental part, however, and in this section attention is given to biological assays and directions for work on isolated tissues and organs. The number of drugs studied, while not large, is sufficiently comprehensive to be representative, and if the student has worked out thoroughly the action of one drug as typical of a group, he can work out the other members. The attention now being given to laboratory methods of instruction, particularly in pharmacology, is evidence of their importance in the acquisition of a knowledge of material facts, for the possession of these is recognized by all competent observers as being fundamental to the scientific progress of modern medicine. It is in this direction the medical student must work if he is to reach the goal of his calling.

EDIBLE OILS AND FATS. By C. Ainsworth Mitchell, B.A., F.I.C. 8 vo., 159 pages, cloth, $2 net. London and New York. Longmans, Green & Co.

This is one of a series of monographs on industrial chemistry, edited by Sir Edward Thorpe, C.B., LL.D., F.R.S., emeritus professor of general chemistry in the Imperial College of Science and Technology, South Kensington, and published by the above well-known house, in which the attempt has been made to link up the application of recent knowledge to modern manufacturing procedure. In the volume before us the main idea of the series is closely followed, the author giving an outline of the chemical composition and properties of the more important oils and fats, and descriptions of the methods of extracting, purifying and preparing them for food purposes.

The following chapter headings show the character of the subjects discussed: 1. Nature, Properties and Compositions of Fats; Constituents of Oils and Fats; Extraction and Purification of Oils and Fats; Methods of Examination; Characteristics of Individual Edible Oils; Characteristics of Individual Edible Fats; Butter and Butter Fat; Hardened or Hydrogenated Oils; Manufacture of Margarine. That the most recent literature of this important field has been utilized in the preparation of this volume is evident from the very complete bibliography presented, which fills an entire section of the book.

ANNUAL REPORTS OF THE CHEMICAL LABORATORY OF THE AMERICAN MEDICAL ASSOCIATION and general index to volumes 1-10 inclusive. Volume 10, Jan.-Dec., 1917. 140 pages, Chicago, Press of the American Medical Association.

As most Era readers already know, the laboratory of the American Medical Association was established primarily to aid the association's Council on Pharmacy and Chemistry in determining the character and quality of the proprietary and unofficial medicaments offered to the medical profession. Much of the chemical information on chemical topics furnished by the laboratory is supplied and published in the "Journal of the A. M. A.", but the reports are published in the form of the volume before us in order that the findings may be readily available for analysts, i. e., those engaged in the examination of medicines. As in preceding volumes the contents are presented in three sections: 1. Reprint of contributions. 2. Reports abstracted from the "Journal"; and 3, reports not previously published.

Schools and Colleges

COLUMBIA UNIVERSITY

Four graduates who completed the university course of the New York College of Pharmacy were awarded the degree of pharmaceutical chemist (Ph. C.) at the 164th commencement of Columbia University, held at Morningside Heights on June 5. Their names are Henry C. F. Arnold, Joseph G. Concialdi, Jr., Louis R. Hyman, and Harold McAdams. Miss Josefina Argueso, a member of the class, was prevented by illness from finishing her examinations.

The Max J. Breitenbach Prize and the Kappa Psi Gold Medal were awarded to Henry C. F. Arnold, and Louis R. Hyman was the successful competitor for the George J. Seabury Scholarship providing for tuition during the fourth year of the University course leading to the degree of B.S. in Pharmacy.

Dr. William Mansfield, who has served as professor of pharmacognosy for the past ten years, has resigned from the faculty to become dean of the faculty of the Albany College of Pharmacy. The trustees have appointed Dr. Charles W. Ballard, formerly instructor in materia medica, to fill the vacancy.

UNIVERSITY OF MINNESOTA

In connection with the commencement exercises of the University of Minnesota held this year, the fiftieth anniversary of the founding of the institution was celebrated, the program consisting principally of addresses made by the three former presidents of the University, Messrs. Folwell, Northrop and Vincent. The entire faculty attended in academic costume and marched through the campus to the armory where the exercises were held. During the week alumni reunions were held, and a reception was given in honor of former President Vincent by President and Mrs. Burton.

The commencement address, which was a stirring appeal to the patriotism of the graduates, was delivered by President Walter A. Jessup, of the University of Iowa. The graduating exercises of the college of pharmacy occurred in connection with the general university commencement, the following students receiving the degrees indicated;

Graduate in Pharmacy—Philip E. Blanchette, Anoka; Cora E. Fossen, Starbuck; Frances M. Gardner, Minneapolis; Selma E. Larson, Wanamingo; Earl Bud Lindoo, Ladysmith, Wis.; Elmer D. Petersen, Fulda; Cecil J. Shea, Virginia; Louis Stein, Virginia, Minn.

Pharmaceutical Chemist—Earl N. Greenberg, Minneapolis; Margaret H. McConnell, Grand Rapids, Minn.; Abraham Strimling, Minneapolis; William Strimling, Minneapolis.

Bachelor of Science in Pharmacy—Muyng Sup Lee, Ham-Kung, Korea.

Doctor of Science in Pharmacy—Charles H. Rogers, Minneapolis.

The graduates in pharmacy named above will be the last class to receive the Ph.G. degree, the course leading to that degree having been discontinued and supplanted by the three-year University course leading to the degree of Ph.C. Those receiving the latter degree this year were all graduates of the Ph.G. course last year. The B.S. degree, conferred this year on Muyng Sup Lee, is given only after four years of university work in pharmacy while the D.Sc. degree, awarded this year to Assistant Professor C. H. Rogers, is conferred for an equivalent of six years of university work.

MARQUETTE UNIVERSITY

Commencement exercises of the Marquette University School of Pharmacy were held in conjunction with the other departments of the University in the Auditorium, Milwaukee, on the evening of June 25, the principal address being delivered by E. C. Fiedler, of Mineral Point. Diplomas to the graduates in pharmacy were presented by Prof. Frederick C. Mayer, the members of the class being as follows:

Oscar Anderson, Matthew Baldwin, Harold Bock, Edmund Bodinus, Allyn Crisler, James Drew, Carlton Gaffron, Emil Harrison, Lawrence Hoffman, Roy Knutson, Sophia Kremers, Edward Kilkelly, Aloysius Murphy, Francis Mulrooney, John Okk, Elmer van Deuren. Medals and prizes were awarded by Rev. C. H. Noonan, S. J., president of the university.

UNIVERSITY OF SOUTHERN CALIFORNIA

Commencement exercises of the University of Southern California School of Pharmacy were held at Los Angeles, on June 6, many of the alumni of the institution being present. The ceremonies were in keeping with the military activities of the country, and the service flags of the different departments figured largely in the decorations. Diplomas were awarded to the following:

Graduate in Pharmacy—Emma L. Awe, E. Czermawski, Harvey C. Daniels, Oliver Delaney, F. I. Doyle, Clarence A. Diebold, Edith McEwins, Richard R. Gunter, Leslie C. Fairchild, Stanley R. Hill, David P. Kimball, Frank Kine, H. Grover Lawrence, William R. Lee, Nathan Lippman, Harold C. Maas, Zenga Oiki, Silas R. Putnam, Samuel W. Quertoimous, Harold M. Raw, Al. J. Sarrall, Warren G. Snow, Irwin E. Spear, Harvey E. Stone, Charles E. Neiner, Rokweo Watanabe, and Emma L. Thorman.

Pharmaceutical Chemist—Harvey C. Daniels and Emma L. Thorman.

A number of the graduates were in the service and were unable to receive their diplomas in person.

OKLAHOMA UNIVERSITY

At the commencement exercises of the School of Pharmacy of Oklahoma University held on June 4, the following received degrees:

B. S. in Pharmacy; Clarence E. Bates.

Pharmaceutical Graduate; Calvin Arnold, Velvie Bridal, Aileen Davis, Ernest L. Duncan, Norwood Hall, Frank Hawkins, Noble Hilsmeyer, Richard P. Hobson, Oscar Hrabe, Frank Haddon, Roy McKeehan, Reola Mansfield, Willard Spiller, and Mary H. Thoma.

Nearly all of the graduates have accepted positions in drug stores at good salaries and the demand is such that there are not enough to fill all the places now vacant. Dean Howard S. Browne received his first call for a woman pharmacist a few days ago.

A course in pharmaceutical bacteriology under the instruction of Dr. L. A. Turley, assistant dean of the school of medicine, will be offered during the summer session of the university of students of pharmacy. This course is designed to prepare pharmacicts for laboratory work for the Government. According to Dean Browne, the Government is anxious to get men trained in pharmaceutical and bacteriology work to do the laboratory work for the physicians.

There are now 58 students and graduates of the school of pharmacy in theh Government service.

Women in Pharmacy

CONDUCTED BY EMMA GARY WALLACE

AROUND THE CIRCUIT

Milwaukee Chapter, No. 19, held its annual meeting at the Wisconsin Club and elected the following officers for the ensuing year: President, Mrs. Herman Lambeck; first vice-president, Mrs. William Loppnow; second vice-president, Mrs. Fred Esau; third vice-president, Mrs. J. Possehl; secretary, Mrs. Oscar Widule; treasurer, Mrs. B. Leidel.

Mrs. S. A. Eckstein and Mrs. L. Pepin were appointed delegates to the W. O. N. A. R. D. Convention to be held in New Orleans in September, with Mrs. E. G. Raeuber and Mrs. Rheineck as alternates. Red Cross Work at Home and Abroad, was the subject of discussion of the afternoon, Mrs. William H. Cudworth giving a most interesting address on the subject.

Mrs. H. E. Rowe, Mrs. Charles Ullemeyer and Mrs. Olson were credited with high scores in the games of 500 at the last meeting of Rock Island Chapter, No. 15. The meeting was held at the home of Mrs. Dan Dahlen. The first part of the afternoon was devoted to Red Cross work and after that a delightful social time was enjoyed.

A Hoover Luncheon was held by Louisville Chapter, No. 11, to mark the installation of the officers elected for the ensuing year at the Tyler Hotel. Mrs. S. E. May, the new president, is taking hold of the chapter work enthusiastically and patriotic work is being emphasized in the undertakings of the members.

The hostesses of the last meeting of St. Louis Chapter, No. 8, at the Planters Hotel, were Mrs. Fricke, Mrs. Noll, and Mrs. Hahn. The Club voted to contribute $5. to the Armenian and Syrian Relief Fund and $10. to the American Red Cross. The afternoon was spent in knitting, sewing, and making surgical dressings. Many of the members took part in the Red Cross Electrical Parade which figured in the Liberty Loan promotion work in that city.

Chicago Chapter, No. 2, is making good use of the summer months by holding Knitting Bees. Among those who have opened their houses to the members for this purpose, are Mrs. W. W. Klore, Mrs. Clara Hirsch, and Mrs. George Haerring. The supply of knitted garments is increasing rapidly. Besides doing good work for our soldiers, the ladies have delightful social times exchanging war time recipes and economic ideas.

The store which has been owned and operated by Mrs. Cotter, of 79 Elmwood Avenue, Detroit, has recently been sold to A. J. Lambert.

The ladies of Cleveland Chapter, No. 21, are actively engaged in assisting in the campaign to raise $100,000 for the Cleveland School of Pharmacy. This will permit expansion and endowment. In addition to this the ladies are doing a great deal to promote social good fellowship among the members of the profession in their city besides taking an interest in patriotic work.

The ladies of the Chapter enjoyed a delightful picnic June 29, at Edgewater Park. There were games and prizes and the kiddies were not forgotten. Mrs. Eugene Selzer made an interesting address, outlining the history of the work for the first year of its existence. A luncheon and card party followed the outdoor activities.

Among the officers elected for the ensuing year to serve the Alumni Association of the California College of Pharmacy are Miss R. D. Fisher, first vice-president; Miss Pauline Nast, treasurer; Miss R. D. Fisher, Miss Pauline Nast, and Dr. Barbat-Winslow, trustees.

Mrs. Frank H. Carter, of Indianapolis, represented the Women's Organization at the Indiana State Meeting held in Lafayette June 25-27. She told what the W. O. stands for and what it is doing. Much interest was expressed by those who had not known anything of the splendid work being accomplished by the wives, and sisters, and mothers, and daughters of the druggists and the women druggists themselves.

Mrs. Oscar Paul, of the Philanthropy Committee of the Louisville Chapter, was recently injured in an automobile accident. She is recovering and it is not thought that her injuries will prove serious.

Miss Sarah Vance, who graduated from the University of Louisville this year with the degree of Master of Science, has been appointed laboratory assistant in the Base Hospital at Camp Hancock, Ga. She resigned her position as assistant in the department of chemistry in the University of Louisville to serve her country.

Miss Ethel M. Swan, of Altoona, Pa., who was one of the graduates of the Pittsburg College of Pharmacy this year, writes of her great interest in the Sorority for women students in Pharmacy,—the "Lambda Kappa Sigma." The headquarters of the Sorority is Boston, the Pittsburg girls being the Delta Chapter. Miss Swan says:

"I do certainly hope that it will be a great success for an organization of this kind is so enjoyed by girl students. And I feel it will help to make Pharmacy more attractive for the girls. I write this only because I am interested in the great work, for we women must certainly do much in order that our Army and Navy may be successful in this Great War."

Cincinnati Chapter, No. 5, has elected the following officers for the ensuing year: President, Mrs. Henry Wagner; first vice-president, Miss M. Dieringer; second vice-president, Mrs. L. C. Cramer; secretary, Mrs. N. B. McElhany; treasurer, Mrs. H. E. Igler; chairman membership committee, Mrs. Caroline Wetterstroem; chairman program committee, Miss Caroline Meyer; chairman entertainment committee, Mrs. H. B. Walterman; chairman philanthropy committee, Mrs. H. E. Igler; chairman visiting committee, Mrs. Wagner and Mrs. Otis; chairman flower fund, Mrs. Louisa Blesi; chairman Red Cross, Mrs. N. B. McElhany; chairman publicity committees—National, Mrs. William L. Brittain, Local, Mrs. L. C. F. Cramer. The Chapter has bought a $50 Liberty Bond and hopes to have it paid for soon.

DR. WM. MANSFIELD NOW DEAN OF ALBANY

Dr. William Mansfield

Dr. William Mansfield, for the past ten years professor of histology and pharmacognosy in the New York College of Pharmacy, severed his connection with that institution at the close of the last collegiate year to become dean of the faculty of Albany College of Pharmacy, entering upon his new duties on July 1. He succeeds Dr. Willis B. Tucker, who has served as dean since the establishment of the Albany institution in 1881, but who now retires with the title of honorary dean. Dr. Mansfield carries with him the best wishes of his old friends and students of the N. Y. C. P. for success in his new undertaking. As a teacher in his particular field he has achieved a wide reputation, his knowledge of pharmacognosy placing him well to the forefront in the comparatively restricted number of experts in this field of work. His book on the "Histology of Medicinal Plants," prepared for the use of students and teachers, is a wellknown textbook in colleges of pharmacy throughout the United States. The Board of Trustees has appointed Dr. Charles W. Ballard to fill the chair vacated by Dr. Mansfield at the New York College of Pharmacy.

MR. MAJOR'S AUTOMOBILE MISHAP

Alphonse Major, of the Major Mfg. Co., New York, returning in his automobile from the annual meeting of the New York Pharmaceutical Association recently, when near Newburgh on the road from Kingston, met with a mishap which nearly cost him his life. Coming down a hill in his machine he met a party in a heavy machine going up the hill and on the wrong side of the track. In trying to avoid a collision Mr. Major ran his car near the edge of the road and into a ditch, which tended to check the speed, but did not prevent the car from striking a tree. The force of the impact sent him over the steering wheel and gave him a severe shaking up, although no bones were broken. His car was somewhat damaged, but after getting a team to pull the machine out of the ditch, Mr. Major proceeded homeward in his car under its own power. He is congratulating himself that the collision was attended with no more serious results, but he has his opinion of "road-hogs" who seem to take pleasure in taking sharp and steep grades at high speed regardless of whether they have their machines under control or are on the right side of the road.

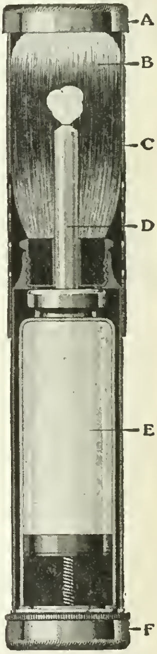
"MENTHOLANUM" IS AN INFRINGEMENT

The Federal Trade Commission recently announced its finding and issued its order in connection with the complaint lodged against Messrs. Block & Company, of Brooklyn, N. Y. This complaint charged that the trade name given to a preparation of mentholated petrolatum, known as "Mentholanum," was so much like the trade name "Mentholatum," used by the Mentholatum Company of Buffalo, N. Y., as to cause confusion and mislead prospective customers, and that this was therefore an unfair method of competition. A precedent is thereby set by the Federal Trade Commission for cases of trademark violation.

NEW TORSION CATALOGUE JUST ISSUED

The Torsion Balance Company, 92 Reade street, New York, has just issued a new catalogue descriptive of Torsion scales and balances for druggists and others engaged in technical trades or general mercantile lines. The catalogue is called "No. 34", and contains many illustrations showing different styles of weighing machines made on the "torsion" principle, including not only prescription and counter balances, but "Powder Scales" designed for weighing powder for filling shells, large numbers of which have been shipped to the American Ordnance Base Depot in France; "Moisture Test Balances" for butter testing, the scale being constructed with percentage beams, so that 0.1 per cent to 30 per cent of moisture can be determined without calculation when 10-gram samples are used; "Seed Testing Balances", designed for seed analysts and for acidity of corn; "Color and Dye Balances," designed for dyestuff manufacturers to meet the requirements for weighing small quantities of concentrated colors, and various styles of "Laboratory Balances", the balance shown on page 42 being extensively used by druggists for rough weighing. It is difficult to conceive of any business in which weighing machines are employed that the Torsion Balance Company has overlooked. If the reader believes there may be such, he should get Catalogue No. 34 and see for himself.

A SELF-LATHERING SHAVING BRUSH



The Warner Fountain Shaving Brush, which is now being offered to the trade, brings shaving cream and brush together in a compact metal case, the device being perfected and patented in every detail. In the handle is a cartridge filled with Mennen's Shaving Cream, while the brush itself is a genuine Rubberset of the highest quality, being simply and durably made, the best materials being used throughout. In use the cream is fed through a flexible rubber tube to the bend of the bristles where the lather is most quickly generated. To lather with the brush you simply dip it in water, turn the cap at the base to feed the cream and apply to the face. The results are immediate, a satisfactory lather being produced in the quickest possible time.

According to the manufacturers, expert authorities on shaving conservatively estimate that 1,000,000 of these brushes will be sold the first year. The combination is practical and will appeal to every man who shaves and particularly to the soldier and sailor, who want an outfit that will be ready for use with the least expenditure of effort. Druggists will find the Warner Fountain Shaving Brush a profitable line to stock, and the demand for it is sure to be stimulated by the national campaign of advertising that will be started about September 1, in such publications as the "Saturday Evening Post," the "Literary Digest," etc. The brush is announced to be marketed by the Warner-Patterson Company, formerly the Walker-Lenz Co., makers of the Warner-Lenz. For full description and details of dealer offer, address the Warner-Patterson Company, 914 South Michigan avenue, Chicago,

Credit and Commercial Case Decisions

By GEORGE H. MURDOCH, New York, N. Y.

Payment of Debt—In the absence of a contrary agreement, a creditor cannot be compelled to receive anything but money in payment of a debt.—166 N. W. (Iowa) 708.

Assignment for Benefit of Creditors—An assignee for benefit of creditors merely steps into the shoes of his assignor, taking his property subject to all existing liens.—166 N. W. (Iowa) 742.

Dishonored Drafts—The drawer of a draft, which was returned dishonored, is primarily liable to a bank for the amount of money he obtained on it from such bank.—201 S. W. (Mo.) 572.

Presumption of Death from Absence—It is prima facie evidence of the death of a person that he has absented himself for seven years and has not been heard from; a presumption of his death arising.—201 S. W. (Mo.) 368.

Signing Contract of Guaranty without Reading—Persons signing a contract of guaranty without reading it cannot complain that they were misled as to the contents of the contract by a letter written them by plaintiff.—103 A. (Me.) 70.

Breach of Contract of Sale—Damages—The measure of damages for breach of contract of sale, consisting of failure to deliver goods of the quality contracted for, is the difference between their value as contracted for and as delivered.—201 S. W. (Ky.) 459.

Scope of Authority of Agent—An agent acting within the apparent scope of his authority, though in violation of specific instructions, may bind his principal in dealing with one who has no notice of the restrictions upon the agent's authority.—201 S. W. (Ark.) 508.

Individual Transactions by Partner—Where a partner enters into a transaction which is within the scope of business covered by the partnership agreement, he must account to the firm, although he uses his own money and is solely liable for all losses.—201 S. W. (Ky.) 488.

Infringement of Patent—An infringer, which both manufactured and sold the infringing article, on an accounting for profits, is not entitled to a deduction, in addition to all proper allowances for cost of manufacture, of a manufacturer's profit.—247 F. (U. S.) 795.

Relief from Contract—While one will not be relieved from his contract merely because it is foolish, a transaction whereof one obtains valuable property for a grossly inadequate consideration will be carefully scrutinized to discover whether such advantage has been fairly acquired.—166 N. W. (Iowa) 720.

Stoppage in Transit—If a carrier is in doubt to whom to deliver goods stopped in transit, it is its right, as well as its duty, to insist upon a full investigation of the facts as to the shipper's right to stop the goods, and it may retain the property in its possession until it is satisfied.—166 N. W. (Wis.) 777.

Popularity Contests—In a popularity contest, where company sells dealer the prizes and plans, with book of instructions telling that fictitious votes should be given candidates to keep up interest, the transaction and notes given are vicious, and the court will not help either party.—201 S. W. (Ky.) 479.

Enjoining Unfair Competition—Where the actual damages suffered by reason of unfair competition are difficult to establish with precision, or perhaps impossible of ascertainment, and the prevention of threatened future injury is the substantial thing, an injunction will be awarded, even though there is no sufficient basis for an accounting.—247 F. (U. S.) 658.

Draft with Bill of Lading Attached—Where a draft and bill of lading is given to a bank by a depositor in exchange for credit, and the draft is dishonored, the bank can apply the debtor's deposits on the debt without the consent of the depositor, and it is immaterial that the draft was made payable direct to the bank; but this is not true if the transaction is a sale of the shipment.—201 S. W. (Mo.) 572.

Delivery of Bill of Lading—Although delivery of bills of lading to the shipper's order to a bank places the legal title to the shipment in the bank, whether there is a sale of the shipment, or merely a transfer of title for security, depends upon the intention of the parties, to be determined in the light of all the circumstances and their conduct in the premises.—201 S. W. (Mo.) 572.

Right to Use Own Name in Business—Every one, in the absence of self-imposed restraint, has a right to use his own name in his own business, in connection with the sale of articles manufactured and prepared or selected by him, by way of advertising the same, provided he does so without intent to perpetrate a fraud on others, or indulge in unfair competition.—247 F. (U. S.) 809.

Cheating by False Pretenses—To justify conviction of cheating by false pretenses, the state must prove beyond a reasonable doubt that defendant made the representations alleged, that such representations were false to his knowledge, and were falsely and feloniously made with intent to defraud the person to whom they were made, and that such person believed and relied upon such representations and acted thereupon to his detriment.—166 N. W. (Iowa) 674.

Telegraph Company Agent of Sender—As between sender and sendee of a contractual offer, a telegraph company is the agent of the sender, who is bound contractually to the sendee by any mistake made in transmission of the message, though the sendee, under proper circumstances, may maintain an action against the telegraph company for damages resulting from violation of the public duty which it owes as a carrier, to the sendee as well as to the sender.—201 S. W. (Ark.) 273.

Justification for Assault and Battery—No one has the right to assault another, unless he is at the time in danger of suffering bodily harm at the hands of the other. Mere words or threats, however offensive, will not justify an assault. A slight assault will not justify the use of more force or violence by the person assaulted than is necessary to protect him from bodily harm. If one is assaulted, and can safely withdraw and thereby avoid danger, it is his duty to do so. —103 A. (Dela.) 16.

Seller's Breach of Agreement—The purchasers of perfumery and toilet articles from a company which engaged not to sell such articles to any other dealer within six blocks of the purchasers' store were not injured by the company's sale to a dealer within the prescribed territory, where such dealer refused to take the goods, and the purchasers could not defend the holder's action on the note given for the price of the goods on account of the company's breach of agreement.—201 S. W. (Mo.) 603.

Raise Lizards to Save Sugar

Mr. R. R. Mole, a well-known authority on reptiles and batrachians of the West Indies, has contributed an interesting article to the West India Committee Circular, published in London, on "Lizards and Sugar," in which is described the very important use now being made of lizards in Trinidad for the purpose of combating the froghoppers, whose ravages in the sugar-cane plantations of Trinidad, and also in other West Indian islands and on the mainland of South America, have seriously affected the production of sugar.

The froghoppers, which are the chief pest to the sugar cane in the West Indies, are indigenous to these islands. They were little noticed until a few years ago, the damage they did to the cane being called "blight," but within recent years they have increased by millions. They owe their popular name to their ability to make prodigious leaps. They obtain their nourishment by sucking the sap from the root and leaves of the sugar cane. The young hoppers, which do most of the injury, frequent the roots of the cane, while the old ones live on the leaves, and on each plant in an infested cane area there are thousands of these insects.

Work of An American Mycologist

The Trinidad Board of Agriculture for some years has had in its employ an American mycologist, Mr. J. B. Rorer, formerly with the Department of Agriculture at Washington, and with Mr. Rorer has been associated a well-known West Indian entomologist, Mr. F. W. Urich. It is due to the observations and efforts of these two scientists that Trinidad has now found a practicable means of saving its sugar-cane crops from the froghopper pest.

Mr. Rorer observed that a fungus popularly called the "green muscardine" is peculiarly fatal to the froghopper, while it does not affect that creature's parasites and natural enemies, and he conceived the idea of cultivating the muscardine, not, as is usually done with such things, in test tubes, but in large cabinets, producing myriads of spores, which by special distributing machines are dusted over the cane fields. On the other hand, Mr. Urich had noted that in the badly infested cane fields there was an almost total absence of lizards, which swarm on most healthy plantations, while frogs and toads were also comparatively rare. All three creatures feed freely on froghoppers. This condition of things he attributed to the presence of the mongoos (Herpestes mungo), a little carnivora which many years ago was brought from India to the West Indies to kill off the rats and snakes. At a considerably later date the mongoos found its way to Trinidad.

A "Lizard Farm" Started

The mycologist and the entomologist joined forces and about four years ago induced one of the principal planters to adopt their methods on a badly infested property. A vigorous extermination campaign was begun and lizards were brought from other parts of the island, mostly from localities near the capital (Port of Spain), where the mongoos are not so numerous, and these were liberated in the cane fields, with the result that the froghoppers have almost entirely disappeared from the estate so treated, the canes are flourishing, and the sugar yield has largely increased in quantity and improved in quality.

It was proved that the fungus destroyed the adult hoppers and that the lizards were devouring huge numbers of both the hopper nymphs and imagos, and so successful were these measures that the management of another large block of estates in the center of the island has established quite a big muscardine cultivation, and in addition has founded a veritable lizard farm, where the Ameiva surinamensis (scientific name of the lizard) is actually bred. Sand banks for lizards to burrow in and wherein to lay their eggs, have been provided; water has been supplied and food furnished in an area 60 by 30 feet, which has been made proof against the incursions of the predatory birds and mammals that make the lizards an article of their daily menu. Here lizards are being brought by hundreds and encouraged to increase and multiply for the sole object of combating the froghoppers and increasing the sugar yield of the estates. In addition to this measure, the banks of the river are being scoured for miles around for toads.

ARMY PHARMACEUTICAL SERVICE CORPS

The regular monthly meetings of the National Pharmaceutical Service Association held throughout the winter in Philadelphia, expanded during the last month into many centers of activity where State Associations were gathered. The Edmonds Bill, for which the N. P. S. A. is working hard, was again approved through strong resolutions at practically every State Association meeting held during the last six weeks. In many places petitions were signed and forwarded to the President of the United States, Secretary of War, and the Surgeon-General of the Army, and Congress, and in Pennsylvania and New Jersey, similar petitions have been circulated to all members of the state associations with the request that they secure signatures of the parents of the men in the service, of physicians and other prominent men in the community, urging upon Congress the passage of suitable legislation for the establishment of a pharmaceutical corps.

One encouraging development has been the active advocacy of the Edmonds Bill by the "Pennsylvania Medical Journal." Everyone who is interested in this legislation should try to secure the support of physicians, the large majority of whom are entirely in harmony with the efforts of this association, knowing well the importance of pharmaceutical help and recognizing the need for the use of all resources of the country, which are available for helping the Medical Service. Another encouraging development has been the support given the Edmonds Bill by the Rotary Clubs of the country, not only in many local organizations, but at the recent Convention of the International Association of Rotary Clubs, resolutions were passed and forwarded to the officials at Washington, urging the establishment of a Pharmaceutical Corps.

Those who are impressed with the importance of securing this kind of service for the men in the Army, can help by securing the interest of citizens especially those who are not pharmacists, to prove the disinterested character of our claim. They should send letters and signed petitions, urging this legislation. Anyone who is willing to help in this way, should correspond at once with the Secretary, E. Fullerton Cook, 145 North Tenth Street, Philadelphia, Pa.

At the annual meeting of the N. P. S. A. held in June 1918, the dues of the Association were increased to $2 so that increased funds would be available for greater publicity. It is desirable that every member should know that the dues when paid, stand for one year from that date. Some publicity has been given to the time having arrived for the renewal of memberships. This is only for those who joined in June, July, or August, 1917. The Treasurer's office sends out statements each month, as the renewals fall due. It will be gratifying to know that 95 members from Nebraska have joined the Association, through the active work done by D. J. Fink, of Holdredge, Neb., the total number of new members during the month being 104.

TAX ON MEDICINALS EXPLAINED

Revised Regulations of Revenue Department Show More Clearly What Preparations Are Taxed and on Which Returns Must be Made

The Treasury Department has issued revised regulations relating to the war tax on medicinal preparations which contain the following references to the manufacturer:

The tax is 2 per cent. of the price for which pills, tablets, powders, tinctures, troches or lozenges, sirups, medicinal cordials or bitters, anodynes, tonics, plasters, liniments, salves, ointments, pastes, drops, waters, essences, spirits, oils, and all medicinal preparations, compounds or compositions whatsoever, are sold by the manufacturer; provided that

(1) The manufacturer claims to have any private formula, secret or occult art for making or preparing them; or

(2) The manufacturer has or claims to have any exclusive right or title to making or preparing them; or

(3) They are prepared, uttered, vended, or exposed for sale under any letters patent or trade-mark; or

(4) They are held out or recommended to the public by the makers, venders, or proprietors thereof, either (a) as proprietary medicines or medicinal proprietary articles or preparations, or (b) as remedies or specifics for any disease or affection whatever affecting the human or animal body.

Scope of the Tax

Every medicinal preparation, compound, or composition which is embraced within one or more of subdivisions (1), (2), (3) and (4) in the preceding article is subject to the tax. If, for instance, an article is made or prepared by a manufacturer claiming to have a private formula, secret or occult art for it, it is taxable, even though it is not prepared, uttered, vended, or exposed for sale under any letters patent or trade-mark, and it is not held out or recommended to the public as a proprietary medicine or medicinal proprietary article or preparation, or as a remedy or specific for any disease or affection of the human or animal body. Preparations made in accordance with formulas contained in the United States Pharmacopœia and National Formulary by pharmaceutical manufacturers, when not held out or recommended as proprietary medicines or medicinal proprietary articles or preparations, or as remedies or specifics, are not subject to the tax; but if so held out or recommended they are taxable, although not identified by any name, trade-mark, or otherwise.

Who Is a Manufacturer

Within the meaning of this subdivision a manufacturer or producer is a person who prepares an article or has it prepared and sells it, and who identifies the article by a commercial name, trade-mark, or trade name, or by other means, or holds out or recommends the article as a proprietary medicine or medicinal proprietary article or preparation, or as a remedy or specific. If the article or its container has on it both a trade-mark or trade name of one manufacturer and the individual or business name of another, the owner of the trade-mark or trade name will be deemed the manufacturer. If the article or its container has on it both the commercial name of the article and an individual or business name, the latter will be deemed to designate the manufacturer. A person who is employed to make an article and receives for it the cost of materials and labor, plus a specified profit, shall be considered a manufacturing agent, and the person who procures the preparation of the article will be considered the manufacturer.

Owner of a Formula

Where the owner of a formula contracts with a manufacturer to prepare an article according to such formula and to deliver it to him in complete, salable form, the labels bearing the formula owner's name, he is considered the manufacturer. A person who bottles or otherwise prepares an article, and merely for advertising purposes places on such article the name of any dealer who may handle it, shall be deemed the manufacturer if the names of both persons appear, but if only the dealer's name appears he shall be deemed the manufacturer: "Held out or recommended" includes representation by any means, personal canvass and statements on the labels, in pamphlets and in advertisements, or otherwise. A holding out or recommendation intended for physicians only is a holding out to the public.

Articles Included

The word "medicinal" is applicable to any substance adapted to cure or alleviate disease or pain. Accordingly, a medicinal preparation is a preparation of any substance whatever intended to be applied for the cure or mitigation of pain or disease. Many articles or substances which are not usually considered as belonging to materia medica may become taxable medicinal preparations by being held out or advised as remedies for diseases affecting the human or animal body. Boric acid when sold under a trade-mark as a medicinal preparation is taxable.

N. A. DRUG CLERKS ON INCOMING CONGRESS

Believing that the next Congress of the United States will be required to deal with many internal and international questions which may fundamentally affect the welfare of the country and the world, and that many of the questions to be considered will relate to the conservation, protection and safety of the public health and thus will demand attention from a medico-pharmaceutical viewpoint, the Executive Board of the National Association of Drug Clerks, at a meeting held in Chicago on July 11, adopted the following resolution:

Resolved, That in the opinion of this association, it is vitally necessary that its members and all those in the entire medico-pharmaceutical sphere of activity, take up active work towards insuring the nomination and election in their respective Congressional districts of men who, by their high order of ability, reliability and character, as well as their undoubted loyalty to our country, are eminently qualified to deal with the tremendous problems which are facing the Nation and World; therefore, be it further

Resolved, That the members of this association and all those engaged in the medico-pharmaceutical sphere of activity are requested to do everything in their power in the selection of United States Congressmen, looking towards this end. It is also urged that this action take the form of speaking with or writing to political leaders, newspaper and periodical editors, prominent citizens and others who form public opinion, requesting their active co-operation and assistance. Every member of this association and all those engaged in the medico-pharmaceutical sphere of activity should also urge their friends and acquaintances to take similar steps, with the end that the next, or Sixty-sixth Congress of the United States, shall be not only a credit to the common sense, patriotism and loyalty of the people, but also be fully capable of comprehending and dealing with the necessary National Legislation relating to life, health and safety from a medico-pharmaceutical standpoint.

ADEN'S EXPORTS OF GUM ARABIC

Over 10,000 Hundredweight Valued at $100,000, Handled in 1917—Trade in Gum Olibanum and Gum Myrrh—Exports to United States

Gum arabic, frankincense, and myrrh are among the more important natural products of Arabia, which are exported through the port of Aden. The market during 1916-17 was excellent, and the prices paid were very good. Owing to conditions affecting the collection of the gum and its transportation to Aden for export, smaller quantities were handled than during the preceding year, but the total value increased, writes Consul Addison E. Southard, of Aden, in a report to the Department of Commerce.

The principal contributions of gum arabic to the Aden export market are from British Somaliland and independent Somali ports. Smaller quantities come from Massaua and from Arabian Red Sea ports. About 50 per cent. of the total exports go usually to India, and France takes a good share of the balance. Small quantities go each year to Great Britain, and during the year under discussion a little more than 10 per cent. of the total exports went to Italy; there were no exports to the latter country during the three preceding years. An interesting feature of the gum arabic trade during 1916-17 was the appearance for the first time of the United States in the list of countries to which exports are made. Only 240 hundred weight went to America, but it is possible that a permanent trade may develop from the start which has been made.

Gum olibanum, or frankincense, reaches the Aden market almost exclusively from independent Somali ports and from Arabian gulf ports. It is the most important gum in the local market, both in quantity and in value. Frankincense is exported in largest quantities to India, the 1916-17 shipments being the largest in many years. Exports to France increased; those to Abyssinia, which is normally one of the regular markets, decreased. Egypt usually takes an appreciable quantity, but during the year under review no exports to that country are recorded. This aromatic gum is used largely in religious ceremonies in the countries named and for disinfection. There were no exports to the United States.

Gum myrrh is next is importance in the gum trade. The principal imports into Aden are from independent Somali ports. The largest exports during 1916-17 were to Egypt, with India next, and the United States third. The latter country took nearly three times as much of this gum from Aden as in any previous year, and indications are that a permanent trade is developing. Gum myrrh is well known for its medicinal properties and for its use as a basis of perfumery.

Comparatively unimportant quantities of gum benjamin (benzoin) are imported from India and the Straits Settlements for distribution in the local Red Sea markets.

The Aden consular district includes the port of Aden, a few small Arab towns on the desert mainland, and the 80 square miles of arid and mostly unproductive territory comprising the British colony of Aden (which includes Perim). The total population is about 50,000. The entire Red Sea district is more or less under the commercial influence of Aden. The principal political divisions directly or indirectly included within the Aden commercial district are Eritrea; Abyssinia; French, British, and Italian Somalilands; Arabian Red Sea Provinces; and the Aden hinterland which extends eastward a considerable distance along and beyond the Gulf of Aden. These various political divisions, including Aden, have an approximate total area of 850,000 square miles, and an estimated population of from 12,000,000 to 15,000,000.

"S. & G." GOODS NOW MADE IN U. S. A.

Schering & Glatz, Inc., have requested us to publish the following information regarding their house and its products:

"Founded in New York City in 1867, the House of Schering & Glatz has been from its very inception, and throughout its existence, an *American* concern, entirely free and independent of foreign control, financial or otherwise.

"The relation of Schering & Glatz to the German-owned Chemische Fabrik auf Actien (vorm. E. Schering) has always been that of an *outright buyer* of that Company's products with the sole privilege of marketing them in the United States. The German concern has never had a dollar's worth of investment in Schering & Glatz, nor have Schering & Glatz ever owned stock in the German concern, either as a firm, or as individuals. The "Schering" in Schering & Glatz stands for the name of one of the founders, Mr. Hugo Schering, a distant relative of the Berlin family. He and the original partner, Mr. Glatz, both American citizens, have been dead for many years.

Schering & Glatz, leading chemical and pharmaceutical products, so long identified by the brand name of "S. & G." are now manufactured in the U. S. A., either by themselves, or under their direct supervision and control. Others, as yet unavailable, will be added as fast as prevailing conditions permit.

Schering & Glatz, Inc., guarantee for all of these products a standard of quality fully the equal of the formerly imported. In stocking "S. & G." products, druggists will henceforth have the double satisfaction of being able to promptly supply articles with an established, steady demand, while feeling assured that they are handling the *American-made products* of a *wholly American* concern."

McKESSON & ROBBINS' NEW PRICE LIST

A new price list of pharmaceuticals and specialties has just been issued by McKesson & Robbins, 91 Fulton Street, New York, including fluid extracts, powdered extracts, tinctures, medicinal elixirs, medicinal syrups, capsules, pills, tablets, etc. In addition there is much information of value to the trade under the headings: Changes in Strength and Formulas of Official Products; Tables of Metric Equivalents; Tables of Percentages for Making Solutions; Drug Legislation; Federal Explosive Law; Handling of Alcohol; Harrison Law Requirements and Rulings.

SUGAR STOCKS IN NEW YORK

The Sugar Commission of the New York Pharmaceutical Conference has sent out the following notice to druggists in Greater New York:

> We wish to announce that beginning with July 1st, and until further notice, the price of sugar will be 8½c per pound. All sugar shipped out since that date has been charged at this rate. We will continue to make delivery by prepaid express in New York and Brooklyn; elsewhere delivery will be made through the jobber or, if preferred, by express collect.
>
> While sugar is apparently more plentiful than it has been, the strictest conservation is still necessary, and the regulations of the Food Administration are more stringent than ever, in order to make the stocks last until the next crop becomes available.
>
> We again remind you that sugar obtained from us is furnished with the express understanding, on your part, that it be used for pharmaceutical purposes only.

ESTABLISHED 1887

THE PHARMACEUTICAL ERA

AN ILLUSTRATED MONTHLY PUBLICATION FOR THE DRUG TRADE

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A BINDER
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Increasing the Supply of Drug Clerks

The relation of the maintenance of advanced standards in examination of applicants to practice pharmacy in the face of the shortage in the supply of drug clerks has been a subject that has received more than passing attention during the present year. Undoubtedly some pressure has been brought to bear upon the members of a number of the boards to adopt less exacting requirements for registration and thereby increase the number of applicants for licenses in order to relieve the present situation and provide more clerks qualified for drug store work. So far as we can discover, however, the trend of opinion among the leaders in pharmacy is against any measure of this character, and it is interesting to learn that this question was the subject of considerable attention at the recent meeting of the National Association of Boards of Pharmacy held in Chicago.

In a report presented to the Association of Boards Mr. Christensen, as chairman of the Advisory Examinations Committee, pointed out that the call at the present time is for clerks, not proprietors or managers, just ordinary clerks, and he recommended to meet this call, an amendment to existing pharmacy laws providing for two classes of pharmacists in every State—the fully registered pharmacist, and the assistant registered pharmacist. While a considerable number of States already have two classes, as licentiates and qualified assistants or druggists, but few States make provision for assistants as a source of supply for clerks.

The suggestion to provide for a class of assistants in all of the States, it is argued, would fit well with the proposition to raise the standards for full registration, for the lower the standards for full registration are allowed to become, the larger will be the supply of proprietors. But it is not proprietors who are needed, so why not increase the qualifications required for entrance to examinations for registered pharmacists? Such requirements would in no way be construed to be detrimental to those already holding certificates of this grade in the various States, while such an advance would tend to place pharmacy on a par with other professions. On the other hand, by making provision under the law for assistants with sufficient qualifications to work with safety to the public under a registered pharmacist, the acute shortage of drug clerks would be relieved by the accession of those who would follow the calling if requirements were less exacting. Such clerks would not be permitted to assume charge of stores, and by providing for such a class, with no higher requirements than are necessary to insure competency for the work the clerks are expected to perform, there would be no need to lower the standards to provide registered pharmacists to act as clerks.

The Bayer Company Exposure

American druggists can file a long list of patriotic and commercial charges against the Bayer Company. By characteristic German methods they have for years practiced Kultur in our midst, and the arrest of five of their officers charged with being dangerous enemy aliens is but the climax of a long list of crimes against American interests.

The Bayer Company has for years been one of the most dexterous and persistent exploiters of our American patent laws, and the recent experience of Aspirin only serves to recall the similar history of sulphonal, trional, and phenacetine. Taking advantage of our patent and trademark laws (which give the manufacturer better protection than accorded by any other nation) they have charged exorbitant prices for valuable medicinal products, collecting toll from American druggists, American physicians and American consumers.

Their sly attempt to hide their German connection behind a dummy firm of typically American name and to steal American profits for their German stockholders from under the very nose of the Custodian of Alien Enemy Property is but what might be expected. The active American head of the company is a brother-in-law of the active head of the German parent company, a man, moreover, who is managing director of the German Imperial War Trade Board. Two responsible employees of the company, Dr. Stamm, manager of their Providence plant, and Dr. Hutz, a former director and manager of their Boston office, have been arrested as spies who actively attempted to communicate valuable military information to the Germans.

Those American druggists who have refused, for patriotic reasons, to sell Bayer products since the concern was first taken over by the Alien Enemy Property Custodian have good cause to congratulate themselves, and it is considerable satisfaction to us that we have refused contracts for advertising from that resourceful and unscrupulous enemy of American drug trade interests. We were further complimented by their statement that we were the first and only publications to refuse to print their advertising. This advertising was aimed to give the trade and the public the impression that their brand of acetylsalicylic acid was the only true and pure product and that having been made in America fourteen years it was a real American chemical. This impression was undoubtedly created in some minds, but the eyes of the American druggist and the American physician and the American consumer must now be open.

Help the Edmonds Bill

Recently the International Association of Rotary Clubs adopted resolutions emphasising the necessity of Congress providing legislation for the establishment of a pharmaceutical corps in the United States Army. These resolutions stated in the most positive terms that it was one of the most important duties devolving upon the Government authorities to provide to the utmost for the conservation of the health of the American soldiers, who are sacrificing the comforts of home and jeopardizing their lives in upholding the principles for which the nation is contending, and who, for this reason, are entitled to the very best medical and surgical skill, which also includes expert pharmaceutical service. The resolutions further stated that it is deplorable that in the United States Army medicines are continuously dispensed by those who are unfitted for such duty and who lack a systematic education in the knowledge of drugs and the art of compounding medicines.

To remedy this situation, the association indorses the bill introduced by Congressman Edmonds, of Philadelphia, and now pending before the Committee on Military Affairs of the House of Representatives, urging that the medical department of the Army be speedily reorganized to permit of this additional safeguard to our soldiers. This action is evidence that others besides pharmacists are interested in providing recognition for pharmacists in the Army. It is well known that practically every State in the Union has laws which provide that those who furnish drugs to the public shall be qualified for such professional work, while in the Army the hospital steward who dispenses the medicines ordered by the physician for the sick soldiers is detailed from the ranks without the requirement of pharmaceutical training.

Physicians in large numbers are aware of this condition relating to pharmaceutical qualifications in the Army, and others who do not fully understand the situation have only to have it brought to their attention in order to secure their support for the legislation that would place pharmacists serving with the colors where the education and training of the latter would be of the greatest advantage to all concerned. Besides ability to handle medicines intelligently, many pharmacists are competent to do chemical and bacteriological work, while their familiarity with drugs should make them especially well qualified to render first aid work, thereby releasing the overworked physician for more important duties. Such a recognition of pharmacy and pharmacists in the Army calls for concerted work on the part of the pharmaceutical profession throughout the country, and if sufficient pressure can be brought to bear upon the members of Congress, it is confidently believed, the necessary legislation can be secured. Pharmacists everywhere should work for the passage of the measure by securing the interest of the parents and friends of soldiers, and by soliciting the help of physician friends who know the need of such legislation.

Evolution of Pharmacy in Russia

Regulations Issued by Peter the Great Still Influence Pharmaceutical Practice in the Late Tzar's Dominions

By OUR LONDON CORRESPONDENT

SINCE the beginning of the European war conditions in Russia have been in a chaotic state, if one is to believe the news reports that have come to hand from the various centers of the late Tzar's dominions. Pharmacy and pharmacists have undoubtedly suffered in the Nation's vicissitudes, and until Peace shall again hold sway it is probable that no one can portray the difficulties the "aptekas" have had to meet in providing medicines for a population living in one of the darkest periods of Russian history. It has always been believed, especially by the average Britisher and American, that Russia, which in many respects has been so much behind most of the Western countries, had before the war the most stringent pharmaceutical regulations of any country in the world. A candidate desirous to learn the "art and mystery of the apothecary" was required to have passed into the fifth class of the Government school or gymnasium, and to serve three years without premium, receiving a salary of about 10 roubles per month the first year, with an increase of about 2 roubles per year.

The beginnings of pharmacy in Russia date back to the time when the healing art was in the hands of wizards, wolfmen, sorcerers and seers, who were the physicians of their day. The stretch of the centuries to the period represented by the vast apteka of K. J. Ferein in Moscow, with its 300 or more employees, and known to most visitors to the recent Empire as the ideal Russian pharmacy, would surely include many facts of interest to the American pharmacist, the history of whose own calling is yet to be written. Recently a writer in the "Pharmatzevtichesky Journal," Petrograd, has attempted to give a brief history of pharmacy in Russia, dividing it into six periods, beginning with the prehistoric period which down to 862 A. D. was "to a large extent obscure and of which either nothing or little is known of pharmacy as then practiced in the country." During that time the giving of medical aid was limited to the use of herbs, and pharmacy was "public" and at a very low stage of development.

Beginning with the second period—from 862 to the time of Ivan the Great—in which the first pharmacy in the land was established, the Russian writer observes that relations with Byzantium which began in the dawn of Russian history, had a great influence on pharmacy which at that time was beginning to acquire a greater or lesser definition of form. At the time of St. Vladimir, 987, Dr. Joann Smer, whom writers call Polovchanin, endeavored to mask his Byzantine origin. The first written work referring to medical activity must be considered the treatise kept in the Svyatoslav collection, 1073. With the later princes, particularly Yaroslaff (1019-1054), doctors begin to appear in Russia, and along with them a great number of Russian monks, who possessed an excellent knowledge of the healing art.

The third period continued till the publication of the ukase for the opening of the first eight free pharmacies—from 1533 to November 22, 1701. Exact data on the appearance of the first pharmacist or of the first pharmacy are not available, but in any case it is impossible, as is maintained in some writings, to consider Frencham as the first pharmacist, or the year 1581 as that of the opening of the first pharmacy. Even at the beginning of the 16th century, there was a considerable number of pharmacists in the service of the Grand Dukes and Tzars of Moscow; and this fact gives one every reason to maintain that early in the century the first Imperial Court Pharmacy existed at the Moscow Court.

In 1547, the pharmacist Hans Schlitte, a native of Gosslar, was sent to Charles V with ample powers, instructions and credentials to obtain the services of various capable experts for the Tzar. (Fechner; Chronik der evangelischen Gemeinden zu Moskau.) Schlitte carried out his mission with success, and obtained 123 people to go to Russia (Richter says over 300), among them being four pharmacists. This fact is evidence that in 1547 there were pharmacists in Russia.

According to the historian Nikonovsky's report (Petrograd, 1767) the pharmacist Matyushko was in Russia in 1553. He was called unfortunately according to the custom of the time, only by his family name.

On September 12, 1557, the Russian Ambassador, Osip Grigorevitch Nepea arrived on the ship "Primrose," traveling through Archangel to Moscow, and with him came the pharmacist Arend Classen von Stellingswerfft, in all probability a Dutchman, and Dr. Standish. Arend Classen occupied a very honorable position in Russia, and for about sixty years served as court pharmacist. He died before 1621. It is stated that on January 21, 1605, he took part in the fight at Dobroinitch (Dobrul) in the Syevsky district of the government of Orlovsky against Dmitri Samosvanetz, thus exhibiting a field war pharmacist for the first time. In the Rumyanzieff Museum in Moscow the gravestone is kept of the first wife of Classen with the inscription "Sr. Zarischen Majestät Hofaptekers." In the church books is the record "Arent Arentsen von Stellingswerfft Kaiserlich er Majestät Apoteker und Interpret," and in the same books further on (1662) "getraut Heinrich Hassenius Kais. Leib Apoteker mit Arend Claus von Stellingswerfft auch Kais. M. Leib Apotekers leibl. Tochter."

The sons and grandsons of Classen were also pharmacists. According to a letter of Queen Elizabeth dated May 18, 1567, to the Tzar, the pharmacist, Thomas Carver with Dr. Reynolds and others had arrived in Moscow. In the middle of the sixteenth century the enlightened family of Stroganoff, owning large metallurgical concerns in the Urals, invited a great number of foreign specialists—technicians, doctors and pharmacists, who worked not only in their special lines, but also as chemists. Then also frequent reference is made to the participation in the mining business of pharmacists as chemists.

Pharmacists early settled in Moscow, the ancient capital of Russia, whose shimmering spires were among the attractions of the famous city.

In the summer of 1581 a few pharmacists arrived in Moscow, among them being first James Frencham (Yakoff Ostafieff Frencham). He remained in Russia until 1584. Returning to Russia a second time in 1602, he brought with him 166 medicines "according to the list of all simples which the pharmacist Yakoff Frencham brought from England." In the seventeenth century, the pharmacist Johann Heinrich Hassenius arrived in 1616 along with the Dutch Minister Isaac Maas, also the pharmacists Ludovicno Dubolt from France, Ramwal, Warley, and many more of various nationalities.

It should be particularly stated that Georg. Gossenius, before he was accepted in the service, was subjected in 1686 to an examination by a committee consisting of Drs. L. Blumstrosken, Zach van de Hulst, and the pharmacist Johann Gutbier and Franz Schläter. After this examination he was solemnly accepted as worthy of the name of pharmacist, and sworn in by the Lutheran pastor, Barthol Faesius, after which he was declared to be in the Tzar's service. This case is notable as the first one known to us of a pharmaceutical examination in Russia, and the establishment of a title in pharmacy.

Pharmacists were invited to Russia by the monarchs by means of personal letters. The first old (or senior) pharmacy in the Kremlin, which apparently existed not later than the fifties of the 16th century, was intended exclusively for the Tzar, his family and notables. Boris Godunoff paid particular attention to pharmacy and also Dmitri Samozvanetz, who after dinner always repaired to the pharmacy and took an interest in its work; but at that time generally the nobles and clergy fought against the partisans of the West and against the introduction of Western civilization. The pharmaceutical and medical societies were controlled by the office of the pharmaceutical "prikas" instituted about 1607. This office was under the management of a pharmaceutical nobleman appointed by the Tzar from among the most important of the nobles (boyarin). On their arrival the foreign pharmacists had first to present themselves at the Embassy, and then at the pharmaceutical prikas, after which they were allowed to reach the monarch.

At the time of the Tzar Alexéié Michailovitch, three pharmaceutical gardens were opened in Moscow for the cultivation of medicinal plants, the most important being close to the Kamenny Bridge, near the Kremlin wall; the second, near the Myasnitskich gates, which was considerably enlarged in 1657; and the third, near the Novo-Nyemetsky suburb. Later, in the year 1683, a branch of the Novo (New) Pharmacy was opened, in the castle of the village of Ismailovsk. As early as 1643 the noble P. I. Sheremetieff had established pharmaceutical gardens in the communities of Smolensk and Petrovsk. The gardens were managed by pharmacists, while medicinal plants were gathered in various places under the guidance of the noble Posobiem. For the collection and naming of plants hand written books served, carrying sketches and descriptions of the plants. These herb lists, composed in 1534, were translated into the Russian language and presented to the pharmaceutical ordonnance (or prikas) in 1661.

On March 20, 1672, by order of the monarch, the second new Pridvorny Pharmacy was founded. It was opened on February 23, 1673, its management being confided to the pharmacist Gutmensch. It was intended for the sale of various medicines of all grades to the people at the rate book prices, and for the supply of materials to the Superior pharmacy and to the field pharmacies.

Pharmacists were members of the Experimental Committee at the pharmaceutical prikas, and at the time of the Tzar Alexéié, pharmacists were also attached to regiments. In the year 1672 the "aptekarsky" (pharmaceutical) prikas (ordonnance) was renamed the Aptekarsky Palata (Palace). The Tzar's pharmacies were fitted up very luxuriously, and in a style that is hardly to be met with at the present time. They were situated in the courts. The vases were of polished crystal mounted with silver and gold. Though the pharmacies were fitted up by foreigners, the stores preserved a Russian tone and always bore a special character. Pharmaceutical business was in existence at the beginning of the 17th century in Archangel, Mohilieff, Polotsk and other places.

Of the literature at the disposition of collectors of that time under the name of herbalists, the following works merit mention: Baugina, K. Gesner, Montiola Stroganovsky's medicines, and a great bibliographical rarity, the Lechebnik (book of medicine) written in the month of September, 1796, and translated from the Polish into the Russian language by instruction of the noble Ph. A. Buturlin, of Serpuchoff, in the year 1588. In the pharmacy there were enumerated *inter alia.* the following classes with their respective duties: Pharmacist, pharmacists' assistants, chemists, distillers, improvers, herbalists, clerks and gardeners.

Measures of the great reformer, Peter the Great, were wisely thought out and he effectively laid the firm foundation on which the pharmaceutical system was placed. These reforms were exhaustive and Peter's pharmacy regulations influenced every aspect of pharmaceutical life, an effort which has continued to the present day, and thanks thereto the pharmacies have to some extent stood against the waves of destruction that have raged during the past ten years.

One of the important moments in the history of Russian pharmacy occurred on November 22, 1701, when was issued the *ukase* for the establishment in Moscow of eight new pharmacies. This proclamation was issued by Peter the Great after his return from a long journey abroad, during which time he had become acquainted with pharmacists and pharmacies in Stuttgart, in Libau, and other places. This ukase is the basis now obtaining in Russia for pharmacies. On November 27, 1701, there had been issued on parchment a deed of grant, given to the foreigner, Johan Gotfried Gregory, for the construction of a pharmacy in the Novo Niemetzky suburb, which was opened in the year 1702. J. G. Gregorius is called a pharmacist assistant in the last pharmacist prikas of 1672, and Gregorius was the first to receive the appellation of pharmacist assistant in Moscow. He was buried in the Lutheran cemetery on May 6, 1740.

A grant for the opening of the second free pharmacy was received by the pharmacist Daniel Hurzyn on December 28, 1701. The pharmacy was opened at the Ilyinsky Gates on the present Staro Nikolsky Street, and is now in the possession of V. K. Ferrein. The first eight pharmacies were opened in the course of twelve years, the last in 1713. In St. Petersburg, Peter the Great established the public Nizhnyuyu Pharmacy at his own cost, the construction of which was finished April 1, 1706, on Prebrazhensky island, in a three story house where there is now a hotel courtyard. The third was the Admiralty Pharmacy on Admiralty island, between the Neva and the Moika. In 1704 Peter the Great established in St. Petersburg Park the garrison pharmacy under the management of the pharmacist Ivan Levkin, and which later was renamed the St. Petersburg Imperial Chief or Superior Pharmacy. It was situated at first in the fortress, and later transferred to the premises of the Medical Chancellery, in Millionoi Street, now the Pavlov barracks. Pharmacies were also established in Kazan, Gluchoff, Riga and Reval; and there were garrison pharmacies in various other places.

By the terms of the ukase of 1707 a special field pharmacy was established in Lubnach for Little Russia. The war statutes of 1716 fixed the number of pharmacies for the whole army and two field pharmacies were established—one for the cavalry and one for the infantry. For each pharmacy there were appointed one pharmacist, two assistants and four learners.

On May 25, 1706, the first hospital in Russia was established by a ukase of Peter the Great, namely, the Moscow General Army Hospital, beyond the Yausoyu river, which was opened on November 24, 1707. The pharmacy connected with the hospital, according to the list of 1706, was in charge of one pharmacist and one special pharmacist, while attached to the hospital there was established the first medico-surgical school, among the teachers of pharmaceutical knowledge and botanists of that time appearing the name of the pharmacist X. Eichler, and later that of I. Maak. During his visits to the sick the chief doctor was followed by the pharmacist.

In 1716, there was founded in St. Petersburg the St. Petersburg Admiralty-Marine General Hospital on the Veaborg side, and in 1717, the Petersburg General Army Hospital (now the Klinic), with a pharmacy in 1731 under the management of the first pharmacist, Friedrich Dittrich, and the Cronstadt General Admiralty Hospital with a pharmacy which, from 1735, was managed by Johann Leonhard Nilus. There was also a school attached to the hospital in which pharmacy was taught.

The great fair held annually at Nijni Novgorod brings buyers and sellers from all climes between Germany and China.

(To be continued)

American Pharmaceutical Association

Report of Annual Meeting Held in Chicago, August 13-17, 1918

OFFICIAL ROSTER FOR 1918-1919

President, Charles H. LaWall, Philadelphia, Pa.; First Vice-president, F. W. Nitardy, Brooklyn, N. Y.; Second Vice-president, Theodore J. Bradley, Boston, Mass.; Third Vice-president, Francis Hemm, St. Louis, Mo.; General Secretary, William B. Day, Chicago, Ill.; Treasurer, Henry M. Whelpley, St. Louis, Mo.; Editor, E. G. Eberle, Philadelphia, Pa.; Local Secretary, Hugo H. Schaefer, New York; Reporter on the Progress of Pharmacy, H. V. Arny, New York.

C. H. LaWall,
Pres., A. Ph. A.

H. M. Whelpley,
Treas., A. Ph. A.

J. H. Beal,
Ch., Drug Trade Con.

F. W. Nitardy,
1st Vice-Pres., A. Ph. A.

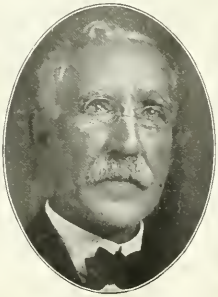
THE outstanding features at the 66th annual meeting of the American Pharmaceutical Association held in Chicago last month were President Dohme's address, which brought to the forefront most of the present day problems of pharmacy, and more particularly, the main reasons why there should be a grand federation of all of the organizations relating to the various phases of the calling; and the report of the Committee on the status of pharmacists in the Government service, presented by S. L. Hilton, of Washington, D. C., who said that while the effort to secure a Pharmaceutical Corps in the Army was far from satisfactory, the outlook is not hopeless and that the Association had a "fighting chance" to secure the necessary legislation if every drug organization would do its utmost to convince the Surgeon-General and Secretary of War of the urgent need of establishing a Pharmaceutical Corps, "thereby eliminating the necessity for as large a number of physicians as is now being called for, and which will, beyond all question of doubt, work a hardship on those remaining at home, while the men in the army would get better service than they are receiving at present."

The attendance at the meeting was regarded as most gratifying in view of the adverse conditions prevailing throughout the country incident to the war, such as the scarcity of clerks, the increased cost of traveling, etc. The entertainment for the visiting delegates was characteristic of Chicago and everyone felt that he was individually welcomed to the Metropolis of the Great Middle West. The sessions were held at the

(Continued on page 252)

Prof. H. V. Arny,
Pres. Nominee

Leonard A. Seltzer,
Pres. Nominee


Prof. L. E. Sayre,
Pres. Nominee

Dr. Henry Kraemer,
Am. Con. Ph. Fac.

Education and Federation of Pharmacy

By DR. A. R. L. DOHME, President of the A. Ph. A.

Early in the present year, as called for by the resolutions of the Committee upon President Wulling's annual address at Indianapolis in 1917, *Dr. Dohme appointed a Committee on Federated Pharmacy to study the subject and report its conclusions to the association in time for the meeting at Chicago. This report was submitted, the Committee stating that the work accomplished had not been as great as some of the members desired, but that one step toward federation had been made by starting a movement toward the enlargement of the Drug Trade Conference, which, it was hoped, would secure a broad federation of all of the national organizations. Naturally, it was expected that Dr. Dohme would make this subject the leading theme of his presidential address, although he devoted some attention to a review of a few other questions that had come to his notice during the year. Those portions of his address relating to pharmaceutical education and the federation of pharmacy are presented herewith.*—Editor.

In order that pharmacy may attain to a position somewhat more approximate to medicine in influence and position than has been the case during the past quarter of a century several things seem necessary.

First: That the number of pharmacies and pharmacists be reduced and that the quality of both be raised. This would result in more pharmacies with better incomes for each and less corner drug stores and apothecary shops.

Dr. A. R. L. Dohme

Second: That a prerequisite law be passed in every state in the United States, so that only graduated pharmacists be granted the license by the state to practice their profession in that state.

Third: That the entrance requirements to all schools of pharmacy in this country be made more rigid so that a recognized state high school diploma be made mandatory by all such schools of pharmacy for matriculation into them.

Fourth: That the courses of study leading to a degree in pharmacy be increased in number and extent, so that the degree will cover more than the usual subjects of chemistry, pharmacy and botany but include besides microscopy, pharmacognosy, materia medica and practical pharmacy and dispensing, also courses in ethics, psychology, physics, biology, geology, political economy, modern languages, advertising, accounting and merchandizing, so that the course will require at least three and preferably four years and when completed will be worthy of the degree of Doctor of Pharmacy and be commensurate with that of doctor of medicine, doctor of divinity, etc.

Fifth: That two degrees be offered by schools of pharmacy for a limited period after the inauguration of these changes in the curriculum of schools of pharmacy: one Phar. G. or graduate in pharmacy, granted after completion of a two years' course as heretofore and the other Phar. D. or doctor of pharmacy granted after completion of a three or four years' course as above outlined. After ten years, however, only the degree of Phar. D. be granted covering the completion of the full three or four years' course from October to June.

Federation of Pharmacy

Having touched upon these several subjects, it now becomes my duty to bring before you my message and the real story I have to tell. In studying the history of this Association, I find that it was conceived in 1852 in a tolerant spirit of broad-minded consideration for the success and welfare of all branches of pharmacy. It was from its birth intended to be true to its name and be in fact the American Pharmaceutical Association—an association so broad and comprehensive as to include every branch and department of pharmacy in America. Both its sister associations, the American Medical Association and the American Chemical Society, have as you observe the same broad comprehensive names. At our meetings the teacher, retailer, manufacturer, wholesaler, broker, clerk, salesman-representative, editor, publisher, etc., etc., have always been welcome as members and have been accorded every opportunity to have their say and be heard. Without going into the details of our subsequent history or into that of our just mentioned sister associations, suffice it to say at this time that the A. Ph. A. finds itself today, after sixty-six years of sterling vigorous life devoted to the welfare and advancement of pharmacy in all its branches, in the unfortunate and unenviable position of having only 2700 members out of about 50,000 pharmacists in this country as compared with about 65,000 members of the A. M. A. out of about 150,000 physicians and 10,000 members of the American Chemical Society out of about 18,000 chemists in the country. Practically every president of this Association has, I find, dwelt at some length upon the importance of increasing our membership, and one of them wrote personally thousands of letters in an effort to personally accomplish this. All, however, to no purpose, for although new members are secured every year and one of our enthusiastic and devoted members even gets practically the whole graduating class of his college to join the A. Ph. A., yet the newly added members only about offset the losses by death, resignation and dropping for nonpayment of dues during the year. This is a fundamental weakness of the A. Ph. A. and there must be a reason for it. No association can keep alive and efficient and progress if it does not secure and hold more than five per cent. of its available members. To my mind the reason is lucidly clear. The American Medical Association and the American Chemical Society secure and hold members in great number because they give an equivalent in real value and service to their members in return for the membership fee. All of you know that the journal alone of each of these two sister societies, without considering the real support, protection and service given their members in various ways, is more than an equivalent for their membership fee. Medical men highly esteem the journal of the A. M. A. and chemists could not do their work properly without the "Journal of Industrial and Engineering Chemistry" and the "Journal of the American Chemical Society." Hence they join without much effort to secure them as members and they remain members when once they have joined the association. Comparisons are always odious and I hence refrain from a statement as to what our members secure in return for their membership. I appreciate fully that our journal could not be better edited, and our Year Book is a valuable book for many members. Let me confine my remarks upon the two publications to these two statements: We have not enough income and means to make the journal better than it is and we have not enough circulation to make it a popular advertising medium to produce revenue; and our Year Book appears too late to make its contents news. No large national association with only 2700 members can produce a service for its members that justifies the payment of the dues. Our members are largely members out of love and respect for the grand old A. Ph. A. which has kept the fires of pharmaceutical science and ethics burning these past 66 years. But during these 66 years pharmacy has changed radically as a trade and profession. Has the A. Ph. A. appreciated that fact and acted upon it? Pharmacy is today more largely merchandizing than it was not only 66 years ago but as late as 20 years ago. The great advances in pharmacy are made in the research laboratories of the pharmaceutical and chemical manufacturers and due to the facilities of these laboratories in controlling and standardizing the strength of these products; the average retailer is not in a position, in most cases although he may desire to do so, to assay and assure himself of the proper quality of his goods. Besides this the successful stores, be they chain stores or not, carry many side lines, and to be successful a pharmacist must be a capable merchandizer who can buy at the right time and price and know how to make inducements to customers to buy his goods. The day for the highly skilled pharmacist, who has a full line of the necessaries for compounding prescriptions and a high standing in his profession that logically gives him the right to expect people to flock to his store for that reason to have their prescriptions compounded, is a thing of the past. It was because the A. Ph. A. failed to realize and appreciate this and act upon it that the N. A. R. D. was formed and its pronounced success as compared to the A. Ph. A. in number of members and consequent service rendered to its members is well known to you all.

"Let us Face the Facts" is the terse expression used by one of our most distinguished and highly esteemed ex-presidents for the growth of mercantile as against scientific pharmacy in the retail drug trade of today. To this I say Amen, and the way to "face the facts" most effectively is to bring about conditions in pharmacy that will not let the material side of pharmacy take the bit in its teeth and run away with the professional side, for then we will lose our ideals and our inspiration for progress in our profession; nor let the dreamers of the ideal pharmacy of the last century blind themselves and all of us against meeting the instruction and course of thought and state of mind necessary to meet the inroads of the chain store and drug department store. However, there is not room for both the A. Ph. A. and the N. A. R. D. if the maximum of service and the maximum of progress in the science of pharmacy are to be achieved. Both associations as now organized and conducted are working more or less at cross purposes and not in sympathy. They thus divide their influence, their strength, standing and their potentiality in half and when to this is added the separate activities, influence, power and potentiality of the wholesale druggist, the manufacturing chemist and pharmacist, the physician supply pharmacist, the proprietary manufacturer, etc., the influence, power, strength, and potentiality of each one of them has been so much divided that they do not and cannot produce enough income to give proper service return to members for their membership fees or wield enough influence to secure a pharmacy corps in the army or prevent undesirable or secure desirable legislation in pharmacy, let alone enough power through money resource and standing to secure the publicity so much needed to educate the public up to knowing what the dispenser and compounder of medicines really means to their life and health.

Has it ever occurred to you to what little extent the pharmacist ever receives any publicity in the press of today, and how little the general public knows about his work? About the only kind of publicity he receives is of the undesirable sort such as when some would-be suicide buys from him some carbolic acid or mercuric chloride. Under the federation of pharmaceutical associations as proposed there would be a department which would write up the achievements of pharmacy, her place in our every-day life and the good things pharmacists do and have always done. Only by the financial income made possible by federation could competent men be secured to specialize on such publicity systematically all over the land.

As desirable as it may be to "face the facts" that pharmacy is fast becoming a merchandizing business rather than a profession in order to get the correct viewpoint of the pharmacy of today and as necessary as it doubtless is to develop in pharmaceutical training and experience a talent and a knowledge for successful merchandizing, let me warn you that there is as well grave danger ahead for pharmacy if she deserts her mortar and pestle for the bargain counter and paying specialty. If the successful drug store of today is apparently the store of the chain or the store of the specialty, controlled in either case by a large corporation; is such a store the proper one to maintain the purpose and need so well instilled in the mind of the physician and the public? Must we not, in other words, maintain our facilities and practice and reputation for compounding prescriptions if we hope to maintain the standing of our profession and its future life? Is not the growth of physicians supply manufacturing pharmacists in direct ratio to the decadence of the prescription counter at the expense of the bargain counter? If this is so—and I have no doubt that many of you agree with me that it is—then it seems wise to have our proposed federated association impressed with the importance of keeping the fires of pharmaceutical science burning at all hazards even though these be tempered with the merchandizing training needed to hold the public interest and attention. When the prescription threatens to become a lost art then will pharmacy be a dead science indeed.

Let us consider the journal so ably edited by our representative pharmacist and teacher, Prof. E. G. Eberle. He is doing the very best quality of conscientious progressive work that can be done. But the journal does not arouse much enthusiasm nor does it effectively stimulate membership nor does it bring up-to-date news in discovery or practice. It replaces our proceedings and spreads out over one year the occurrences of our annual meetings with a certain limited amount of special articles or editorials, branch meeting news, etc. When this reaches the member it is mostly old news, it occurred anywhere from thirty days to twelve months ago. This is not the editor's fault—it is the unfortunate condition created by the association and council when it did away with the Proceedings. As for me, give me the old volume of the Proceedings every time where I can find what I want in a moment and have it all compact. The result is the journal has but little circulation except among our own members and enjoys in consequence but a limited advertising value and secures but little income from this important source.

The same applies to the N. A. R. D. journal to some extent, and both editors are expected to edit the journals and secure the advertisements to make it self-sustaining and neither of them can successfully accomplish both and do not in consequence. In journals as in pharmacies we have by far too many of them for the good of the profession and for any to be of the quality they should be. Under federation with a membership of 25,000, think of what a journal the Association could produce and what a real chance Professor Eberle would have to produce something more nearly in keeping with his ideals and with the journals of the A. M. A. and the A. C. S. Then the Year Book, once the report on the progress of pharmacy of the old Proceedings. Surely the quality of the work that Professor Arny is turning out leaves nothing to be desired. It is a splendid achievement and one of which this Association can well be proud. As a report on the progress of pharmacy it simply cannot be improved upon. But it reaches our members anywhere from one to three years late. Most of our members and most pharmacists probably do not use it to the extent they should, but those that do are getting very old news and they are not as satisfied as they should be.

This is not Professor Arny's fault, for he is a very busy man and he can put in only his spare time to do this terrific amount of work and he simply cannot do more than he does nor could anyone else unless he were paid to devote all his time to the work with plenty of assistants working under the same conditions. This we cannot afford to do and so we must do the best we can under the inevitable handicap produced by the limited income produced by only 2700 members.

Let us face the situation as to what we propose to accomplish by federation; of what does it consist and how can we bring it about in a successful, useful and practical way?

We propose to accomplish, by federating all national and state pharmaceutical associations into one large assocation, the following important things:

1. A largely increased representative membership representing practically all those interested in and engaged in pharmacy in all its branches. As there are about 50,000 such available members we should secure at least 25,000, and if my ideas and plans are realized I feel we will get 35,000.

2. Unity of purpose and action in all matters pertaining to legislation, education, publicity, ethics, standards, methods, economics, and efficiency in pharmacy.

3. Real service to all pharmacists in the matter of a real leading journal and of permanent management and activity by competent well-paid men in laboratory work, legal advice and protection, expert advice, employees, trade marks and patents, exchange of unsalable goods, support and backing when unjustly attacked in press or court. We will, in short, be able to give more than a real **quid pro quo** in return for membership fees so that membership in the federated association will be a hall mark in pharmacy and be necessary to enable a pharmacist not a member to successfully compete with one who is a member.

4. A gradual elevation of the quality of those who enter the profession by a unanimous decision so to do. This is not possible with the divided interests that exist to-day, but quite possible when all favor it, work for it, and stand for it. This will gradually but effectively create increased recognition of the profession by the public and the law-making bodies of the nation.

5. Increased prosperity for the individual members in their business, due to decreased competition, increased efficiency and service, and less capital required to do business, due to the co-operation of all for the common good.

Federated pharmacy, as I conceive it, consists of a consolidation of all national and state pharmaceutical associations into one large association with a new constitution and by-laws, with a permanent set of offices and laboratories, library and bureaus in one building either owned or leased by the association and permanently managed by a Board of Control consisting of three well-paid, competent men. It means that all these national associations and state associations shall continue their individual existence as they are now and manage and direct their own affairs in their own particular line just as they have been doing by their own officers and organizations as heretofore. Thus the wholesale druggists will continue to be known as the N. W. D. A. or the Wholesale Section of the federated association and the same for the retail druggists which shall be known as the N. A. R. D. or the Retail Section of the federated association, etc. These will be analogous to the several sections of the A. M. A., as for instance the Gynecological Section of the A. M. A., etc. I use the words Federated Association because while I fully believe the name of this Federated Association should be and will be the American Pharmaceutical Association, I appreciate that this is a matter which the Federated Association, when formed, should itself decide. All matters, however, pertaining to the wholesale drug trade will be acted upon and decided upon in the meetings of that section of the federated association and their action shall be final and not subject to any review or action by the Federated Association and the same applies to the N. A. R. D. section, the manufacturers' section, the A. C. of Ph. F. section, etc. All matters, however, pertaining to general pharmacy shall be taken up, considered and acted upon in the House of Delegates and Council or upper chamber of the Federated Association, such as legislation, ethics, publicity, service, law, relations to the public, to other associations, the state, the nation, etc. Wherever an united front is needed to accomplish a needed reform or law, the defeat of undesirable legislation or support of a purpose helpful to pharmacy, the consideration should be had in the House of Delegates of the Federated Association. Membership in the Federated Association shall be individual and shall entitle the member to all publications and services of the association. If the sections determine to offer special services to their members for which they will charge special fees this will of course be quite proper; and for section memberships corporations, as well as firms or individuals may be eligible. Membership in the section also carries membership in the association but in case of corporations or firms these must name an officer or member of their firm or company to represent them in the association. Instead of going into all the details of the proposed federation I will submit herewith as part of this address a tentative plan for federation, which I have drawn up to serve as a practical basis for discussion of an actual method of effecting the proposed federated association and which I will read.*

From this you will see that practically everything is provided for and that a list of bureaus and laboratories is proposed which will render the services to which all members are entitled. Let me just refer especially to a few of these. The bureau of chemistry and pharmacy will be a laboratory where members can send their preparations or products to have them examined, tested or analyzed as to their label, literature, excellence of product, correctness of assay or strength, etc. This will be an advantage because they will know that it is being done by a friendly though accurate and just agency which will advise them fully about it and in confidence.

The exchange bureau for unsalable goods will enable them to exchange unsalable goods for salable goods and thus reduce their stock and with it the amount of money tied up in their business. Thus in many ways will it be possible in an association of which all pharmacists are members to be of service and assistance to members who will feel that they have back of them in this service the entire pharmaceutical profession.

The state associations will be integral parts of the federation, and membership in the federated association will entail membership in the state association. Whether they will be affiliated through the House of Delegates as such or whether they will be asked to form an association of state associations and have this represented in the House of Delegates by five delegates, just as are all other national associations, is a matter which the federation must decide. To my mind it would be preferable for all the state associations like all state boards of pharmacy to form a national association of state associations and that this should meet as a section of the federated association attended by delegates duly appointed from each state association. They could in such an association harmonize many of their differences and points of opposition in prerequisite laws, licensing of pharmacies or pharmacists or both; educational requirements, etc., etc. They would have their voice in the federated association by being represented by five delegates similar to every other national association. Thus would the influence and organizing power of the federated association be much increased, spreading out and reaching into every state just as the A. M. A. does, only in case of the latter this is more complete still and extends to the county medical association, *i. e.*, subdivision of the state. We have provided in a way for this county association by the establishment of our local branches, which would of course be part of our association and eventually become subdivisions of the state associations.

We can bring about this badly needed and greatly to be desired federated association by all those engaged in pharmacy or any of its branches deciding to be willing to give and take and to agree that to be part of an united fraternalized profession is much better than to think only of ourselves and our special interest and let the others look after themselves. If we all agree not to want everything just our own way but accept a state of mind and organization that offers benefits to all that are impossible when we each paddle our own canoe, no reason exists why we should not federate our interests and in helping ourselves also help the other fellow. Then we can form such a federated association and develop an organization and a management as will enable pharmacy to hold its own with any other association or profession and secure many of the advantages and needed recognition now denied us because we are so unharmonious and unco-operative.

Each association should then name delegates to represent it and act for it at a convention of associations called for the special purpose of forming a federated association, provided this is not accomplished as I hope it will be at the special meeting of our House of Delegates called for that purpose at this meeting Wednesday, August 14, at 4:30 P. M. My reason for hoping and believing that federation should be decided upon and entered upon now is that the time is opportune, the moment psychological and the world-spirit in harmony with federation and consolidation.

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*Printed in September.

When you consider what medicine was before there was a large united A. M. A. and what it is now and what its relative influence and power was then and is now; and when you consider what a more or less useless and theoretical thing the American Chemical Society was once and what a powerful force for constructive good and influence it is now, you must appreciate and see what possibilities in growth, strength, influence, power and standing lie before pharmacy if she will only do as they did, and federate all her interests into one large association presenting a united front to all questions and problems that confront it. We are now in the position of the thirteen separate states and like them a prey to any united agency attacking us and in consequence usually, as in case of our pharmacy corps, laid low in the contest. When these thirteen states became the United States they surmounted all obstacles, accomplished many great things and eventually as today have become the greatest uplifting and constructive force in the world for the welfare of mankind and the struggle for liberty and the rights of man. Shall we remain the thirteen states or shall we become the United States? That is the great question which I now leave in your hands and in your hearts.

Pharmaceutical Notes from Great Britain

The latest product to come into Government control is saccharin and special prices have been fixed for the tablets. It is important to add that the fixed prices only apply to tablets made with British saccharin, but it is officially estimated that before long there will be sufficient British made saccharin to meet the large demand. In the meantime, however, it is not sufficient and American saccharin fetches remarkable prices, value in London being sometimes between $80 and $90 per pound after the customs duty of $18 per pound has been paid. Tablets made with saccharin bought at this price could obviously not be sold at the price which has been paid and therefore, until the British production is adequate, tablets made from American saccharin will be selling at prices above those at which British saccharin tablets can be obtained. The enormously increased demand for saccharin is due to the fact that in the tea shops a tablet of saccharin takes the place of a lump of sugar. Maximum prices that have been fixed for tablets of British-made saccharin are as follows: Wholesale, "Full Strength" (0.3 grain of 550 saccharin in each tablet), 1 dozen bottles of 100 tablets in each, $3; 1 dozen bottles of 500 tablets in each, $14. "Half Strength" (0.15 grain of 550 saccharin in each tablet), 1 dozen bottles of 100 tablets, $2; 1 dozen bottles of 500 tablets, $9. Retail, "Full Strength," 1 bottle of 100 tablets, 30c.; 1 bottle of 500 tablets, $1.50. "Half Strength" 1 bottle of 100 tablets, 20c.; 1 bottle of 500 tablets, 90c.

Pharmacists and Military Service

The new Man Power Bill which raises the military age to 51 years will naturally render hundreds of pharmacists liable to military duty of one kind and another. Up to the present, however, pharmacists have been treated with the greatest consideration on the ground that this work is of national importance, especially in connection with the national health insurance scheme. Under the circumstances therefore, the younger men will no doubt be called on before the older ones have to join the colors. It goes without saying that many pharmacists are already in the Army and that so far the pharmaceutical service of the country is in good condition.

A Compulsory Curriculum

An important step has been taken by the council of the Pharmaceutical Society in the direction of the establishment of a compulsory curriculum of study for pharmaceutical students. The regulation which has been made by the council and submitted to the government provides that each candidate at the time of entry for the qualifying examination should produce evidence certified by the actual teacher that the candidate had attained a systematic course of instruction occupying a period of not less than six months, such instruction having embraced 60 lectures on chemistry and physics, 45 on botany, and 28 on materia medica. It may seem surprising that the council should choose this amount when the war is at a critical stage to press forward a matter which in the past has never failed to excite a large amount of adverse criticism. The explanation is that the whole educational scheme of the country is in the melting pot and that it is necessary to reform the system of pharmaceutical training to bring it into line with the larger national scheme. There is every prospect that the Pharmaceutical Society's plan will be put into operation, but when things settle down one can foresee that difficulties will arise in connection with the approval and registration of schools. Obviously one cannot judge of the training unless one knows something of the school where the training was received.

NO DRUGS IN CANAL ZONE

No alcoholic liquor nor drugs may be possessed, given away, used or carried through the canal zone. The order affects the American garrison, 6,000 civilian Americans and 20,000 natives. The military order forbidding United States soldiers to enter the cities of Panama and Colon will continue till the Panama government reforms vice conditions.

The eucalyptus oil industry is of considerable importance in New South Wales, Australia. The oil is used mainly for three purposes—in pharmacy, in the separation of metallic sulphides, and for perfumery and flavoring. There are about three hundred species of eucalyptus in Australia, but of these not more than twenty-five varieties can be used for oil.

Germany's Stolen Chemistry

Important Scientific Discoveries and Industrial Processes of All Nations Appropriated by the Germans

By TOWNES R. LEIGH, Professor of Chemistry, Georgetown College

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THE history of medicine overlaps that of Pharmacy, and if one were to follow the line of development which marks the great progress made in the art of preparing remedies, he will find many advances that can by no stretch of the imagination be credited to Germany. The process of percolation, the importance of which in pharmacy in the last century cannot be over-estimated, was first applied to drugs and medicinal substances by Boullay brothers in Paris, in 1833, but it remained for American pharmacists to demonstrate its practical usefulness, the labors of Duhamel, Procter, Grahame, Squibb, and others leading to the adoption of the process in the United States Pharmacopoeia of 1840, the first official standard to recognize the use of the method. Subsequent editions of the U. S. P. down to the present time continued the method, confirmatory evidence of its value.

Pharmaceutical Education

In the early dissemination of general pharmaceutical information, Germany, with all of her wealth of technical literature, is a late comer. Pharmaceutical journalism was born in America in 1829, long before the appearance of any other periodical for the exclusive use of pharmacists. This event was made possible by the druggists of Philadelphia, who early recognized that special educational training was necessary for those who would solve the vital questions pertaining to success in pharmacy, and as a result of their deliberations, in 1821, founded the Philadelphia College of Pharmacy, the first educational institution teaching pharmacy in the whole world.

One has but to look over the field of manufacturing pharmacy as it appears in France, England and the United States to become aware that the inventors who made labor saving devices responsible for much of the present day progress in the art of preparing medicines are not of the "made in Germany" type. It would be useless to assert that great progress has not been made in similar lines in Germany. With the establishment of historic facts, however, it will be found in most cases that the pioneer who first gave birth to the germinal idea was not a German, but a thinker and a toiler of another nationality. German scientists and statesmen have gloried in their great industrial development and have pointed to it as proof of superior national genius, but the student of history will find that this progress, great as it is, has been attained by the Hun in building in large part upon the discoveries and inventions of those outside of Germany, at a time when other nations were engaged in the greater problems of colonial development and the extension of the civilizing influences of humane government. Germany cannot lay claim to propagating the original ideas that have resulted in the greatest advances in pharmacy any more successfully than she can deny the influence of Perkin's discovery of mauve, which gave the first impetus to the aniline industry.

In the realm of medical science the most important discoveries have not come from Germany. Clinical instruction in hospitals began in Italy and from there was carried into Holland and afterwards highly developed in Leyden. It was John Bell of Scotland who pointed out the difference between the sensory and motor nerves. Harvey, an Englishman, discovered the circulation of the blood; and Rudbeck of Holland, lymphatics. Dr. Wells, an American, first demonstrated the use of anesthetics. Dr. Jenner, an Englishman, discovered the vaccine prevention of small-pox. Dr. Lister, also English, was the father of antiseptic surgery; Pasteur, the Frenchman, originated serum therapy; and Roux, also a Frenchman, discovered by chemical means the diphtheria toxin. The epoch-making discoveries on the phagocytic activities of the white blood corpuscles were made by Metchnikoff of Russia. The cathode rays is from Crookes, of England, and it was N. R. Finsen of Denmark, who suggested the use of the ultra-violet rays for treating certain diseases; and radio-activity was discovered by the Curies in France.

Rubber combination plasters, including as they do the surgeon's adhesive plaster, so widely used, are distinctively American, and Germany has never equaled them. Absorbable sutures and countless other pharmaceuticals could never have been produced without antiseptics and sterilization for which we are indebted to Pasteur and Lister, above mentioned. It was Mothes of Paris who popularized gelatine capsules for use in nauseous medicines, and the Tilden Company, of New York State did a similar service for sugar-coated pills. Dr. Fuller, an American, introduced in 1878 another distinctive form of American medicine, called "tablet triturates," the magnitude of whose manufacture can be guessed when it is learned that one firm alone makes five hundred different varieties. Dover's powder is a gift of Thomas Dover, a Britisher, and Epsom salt as a medicine is also of British origin. Plaster of Paris, widely used in setting broken limbs, was first obtained and used at Montmartre, near Paris.

The process of injection was invented and brought into vogue by Dr. Alexander Wood of Edinburgh; collodion was first applied to purposes of surgery by Maynard of Boston. We have to thank Scheele of Sweden not only for tartaric acid now largely used in effervescent draughts, but lactic acid, citric acid, prussic acid, glycerine and a score of other important substances, among them chlorine, now used by hundreds of cities for the sterilization of their water supply and by laundries throughout the country for the whitening of the linen. To Frillat of France we are indebted for the commercial application of formalin, and to Dr. Barrow for its use as a specific for blood poisoning, or sepsis, by injection.

While chloroform was discovered by Guthrie of

Scotland in 1831, it was Simpson of England who introduced it into surgery in 1847, one year after Dr. Morton, an American, had proved the value of ether as an anesthetic. Saccharine, which is a few hundred times sweeter than suger, was first synthesized by an American chemist. Robiquet, a Frenchman, isolated codeine and narcotine; Pelletier and Caventou, likewise Frenchmen, quinine, cinchona, strychnine, and brucine; and M. Desfasses, solanine, the poisonous alkaloid of the black-nightshade. It was Kuno of America, who received a patent for antipyrene. The discovery of the antipyretic properties of antifebrin, known commercially as acetanilide, was due to a mistake on the part of the laboratory boy who supplied this substance in place of naphthalene asked for.

If the introduction of anesthetics marked a new era in surgery, a similar claim may be made in connection with the substance adrenalin, which was isolated in 1901 by the Japanese, Takamine, working in Columbia University. Because of the constricting effect of the chloride of adrenalin upon the blood vessels, the surgeons find it their most valuable styptic.

Turn where we may in the field of medicine or surgery or bacteriology, we find that their great fundamentals were not "made in Germany." Malpighi, professor of medicine at Bologna, used the microscope in his researches as early as 1660; sixteen years later Leuwenhoeck, while carrying out investigations by the aid of lenses ground by himself, discovered animalcules. Though bacteriology in reality dates from the observation of this keen Hollander, it was a brilliant Frenchman, Pasteur, who founded the science of bacteriology. It was he who isolated the hydrophobia bacillus, and found the cure for rabies; Nicolaier of France, discovered the lockjaw bacillus; and Sternberg, an American, the pneumonia bacillus. Sir Ronald Ross, of the British Navy, discovered the complete history of the parasite which produces malarial fever. His important investigations opened up the way to a very wide field of research. In 1894 the germ was isolated by a Japanese doctor, Professor Kitasota; Major Liston of the Indian Army soon found that the flea which infested rats was guilty of spreading the Asiatic plague; and it was Sir David Bruce who discovered the parasite which produces sleeping sickness.

Remedy for Typhoid

Typhoid fever, a disease that has killed more soldiers than were ever killed by bullets, has been virtually banished from the armies of the civilized world by the anti-typhoid vaccination; and the disease has been greatly reduced in severity and mortality by the bacterin treatment. The honor of introducing typhoid immunization is due to Sir Almroth Wright, whose method of prevention saved many of the British troops in 1898, and has now come into world-wide use, not only among the armies, but in civilian life as well.

Besredha, working in the Pasteur Institute, demonstrated that bacterins sensitized by treating them with immune serum are superior to insensitized bacterins. The sero-bacterins of Besredha were made commercially available by a company in Philadelphia.

Noon, working in Sir Almroth Wright's laboratory, demonstrated that hay fever may be prevented and the disease successfully treated with subcutaneous injections of pollen extracts. The introduction of the Bulgarian bacillus as a therapeutic agent is due to the results obtained by Metchnikoff in the treatment of his own case. In 1891 Roux, of France, announced that antitoxin formed in the blood of animals immunized to diphtheria bacillus could be used in the treatment of the disease in man. In this resumé, mention should be made of the discovery of the organism of epidemic cerebrospinal meningitis and the development of the serum for its successful treatment, also the discovery of the bacillus of infantile paralysis—all done by Flexner at the Rockefeller Institute; and that it was Dr. Murphy of Chicago who perfected the drop method in irrigation of infectious canals.

Countless other inventions and discoveries, among them the stethoscope, invented by the Frenchman Laennec, might be mentioned to prove that we are not indebted to Germany for many things that are fundamentally important to the science of medicine. In passing, let us recall that we are not indebted to the Germans for the use of senna, rhubarb, madder, jalap, ipecac, sarsaparilla, balsam of tolu, gum arabic, tannin, tobacco, Irish moss, balsam of Peru, refined camphor, cimicifuga, oleic acid, glacial acetic acid, hydrochloric acid and nitric acids, etc.

Discoveries in Dentistry

Though Pierre Fauchard, a native of Brittany, is the father of modern dentistry, America excels all other countries in dental science and practice. It is to our country that the world owes the greatest development in the art of replacing the lost portions of tooth crowns by gold fillings. To Dr. Robert Arthur of Baltimore we are indebted for the discovery of the cohesive property of annealed gold foil; to Dr. S. C. Barnum of New York, for the introduction of the rubber cofferdam; to W. H. Atkinson, also of New York, for the dental mallet; to Dr. W. G. A. Bonwell of Philadelphia, for the invention of the electro-magnetic mallet; to Morrison for the devising of the dental engine; and to Goodyear for hard-rubber dental plate. Through the invention of the improved technique by Dr. C. H. Laud of Detroit and Dr. N. S. Jenkins, an American resident dentist at Dresden, the use of porcelain as a restorative material became practically possible. Miller, who discovered the cause of the decay in teeth; Wells, who introduced laughing gas in dentistry, Allen, who perfected the enameled platinum denture, and Younger, who first planted teeth in artificial sockets, were all Americans. In 1863 Clayton, a teacher of chemistry, by means of a perfected apparatus revived interest in the use of laughing gas as an anesthetic. Dr. W. G. T. Morton, a former partner of Dr. Wells, introduced the vapor of sulphuric ether for the same purpose; but to Clover are we mainly indebted for the many fixtures which make modern anesthesia so little to be feared in dental and surgical operations.

Richardson of America was the first to advocate the galvanic current in inserting drugs into tissue and W. W. Keen first used the surgical engine. The spiral osteotome was devised by Cryer, a professor in the University of Pennsylvania, who also brought out the universal forceps. Dare invented the hemoglobinometer; Crile, the dental clamp; Parmly the bayonet shaped forceps and the full curved forceps; Beck, Beck's paste, used with the X-Ray in investigating the depth and source of sinuses.

It was Professor Nicholas Senn who first used the term "alveolitis," the disease described by Younger in 1864, and now known as Riggs' disease in honor of Dr. John Riggs who brought the matter before the profession. Beyond doubt dentistry would be in a very crude condition today had it not been for Americans. Even the Kaiser was forced to acknowledge the superiority of the American dentist by employing one to look after his "imperial teeth."

New Books for Pharmacists

ACTION OF TRIOXYMETHYLENE ON VARIOUS HYDROCARBONS IN THE PRESENCE OF ANHYDROUS ALUMINUM CHLORIDE. By Vaman R. Kokatnur, B.Sc. (Bombay University), M.S. (University of Minnesota). 8 vo., 45 pages. Minneapolis. University Printing Co.

This bulletin embodies the thesis submitted by the author in partial fulfillment of the requirements for the degree of doctor of philosophy in chemistry to the graduate school of the University of Minnesota, and was undertaken at the suggestion of Dean G. B. Frankforter in order to extend the dehydrating action of aluminum chloride, which he first reported at the International Congress of Applied Chemistry at New York City. In his paper Dr. Kokatnur shows that tryoxymethylene, by reacting on hydrocarbons, in the presence of aluminin chloride, gives condensation products similar to those obtained by Baeyer by the action of formaldehyde on hydrocarbons, in the presence of sulphuric acid. In the reaction, compounds of the type diphenylmethane and anthracene are invariably obtained as condensation products. It is also shown that aluminum chloride detaches the methyl groups from mesitylene, transplanting them back again in other positions, thus giving rise to durene and m-xylene. Aluminum chloride also has the power of transporting chlorine atoms, as in the case of a pyridine compound, the various reactions of aluminum chloride cited being found by the author to be primarily due to the dehydrating power of that compound and nothing else.

ORGANIC COMPOUNDS OF ARSENIC AND ANTIMONY. By Gilbert T. Morgan, D.Sc., F.R.S., F.I.C., professor of applied chemistry, City and Guilds Technical College, Finsbury. 8 vo., 376 pages, cloth, $4.80. London, New York, Bombay and Calcutta. Longmans, Green & Co.

This monograph places before the reader a connected story of the work that has been done in the field of chemistry relating to our knowledge of the organic derivatives of arsenic and the corresponding derivatives of antimony. The therapeutic use of the arsenic compounds especially, has had much to do with the synthesis of organo-metalloidal compounds, although these substances, according to the author, have been under investigation from the birth of chemistry, while the researches in this direction have played an important part in the establishment of the current theories of the molecular constitution of matter.

The members of the series of organic arsenic and antimony compounds are so numerous that the author does not attempt to describe every substance thus classed, but those having either a practical application or which present some aspect of theoretical interest are treated very fully. After describing the attempts of the early investigators to determine the chemical nature of arsenic and antimony, particularly the researches of Bunsen and others on the compound that Berzelius named "cacodyl," the author states that to France belongs the honor of the first pioneering efforts both as regards the earliest known aliphatic arsenicated compounds and the more useful discovery of an aromatic arsenical drug. The work was later taken up by German chemists, and twelve years after Bechamp's discovery of the first aromatic arsenical, Michaelis began a systematic study of the aromatic derivatives of phosphorus, arsenic and antimony, establishing first at Karlsruhe and Aachen, and then at Rostock, a school of chemistry in this particular branch of organic synthesis.

Bechamp's compound of arsenic began to be tried in therapeutics in or about the year 1902 in the treatment of sleeping sickness, and then came Ehrlich's line of experiments in the line of which it is stated that 605 compounds were examined before that investigator arrived in 1909 at "salvarsan" or "606." In 1911 this discovery was followed by the production of "neosalvarsan," which is claimed to combine the valuable germicidal action of salvarsan with the property of dissolving in water or physiological salt solution with a neutral reaction. Both of these substances are chiefly relied on in the arsenical treatment of syphilis. Work in this field is still continuing, attention being directed to certain partly methylated hexaminoarsenobenzenes which have the noteworthy property of forming stable solutions with soluble carbonates. This book, like the other monographs on industrial chemistry issued by these well-known publishers, brings well to the forefront all of recent facts bearing upon this subject

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NARCOTIC DRUG ADDICTION, the Modern Scourge. By Livingston S. Hinckley, M.D., life member of the American Medico Psychological Association, Fellow of the American Medical Association, etc. 12mo., 40 pages, cloth, 50c. The author, 33 Halsey St., Newark, N. J.

The author states that there are more than two million people in this world who are suffering the tortures of the damned through addiction to the use of narcotics, and that the country is facing to-day a situation infinitely more serious than that which faced it when human beings were placed upon the block and sold at auction. This suffering is a malady as real and as fatal to the future of the human race as the most dreadful disease of which medical science has any record, and the author believes that unless something is done to stop the ravages of this scourge, the foundations of civilization may be destroyed. In his opinion the drug addict must be recognized as one suffering from a disease from which he cannot be saved without medical aid, and means should be found to help these unfortunates without throwing them into the hands of the police or sending them to quick "cure" establishments, where, aften ten days' treatment, if they survive, they are turned loose in such a deplorable mental and physical condition that they return to the drug as the only means of obtaining relief. If drug addiction was considered as a disease and so treated by competent medical assistance, and addicts were given the same consideration as those suffering from any other malady the complete eradication of drug addiction would be possible within a comparatively short time.

A MEDICAL DICTIONARY. By W. B. Drummond, M.B., C.M., F.R.C.P.E., medical superintendent, Baldovan Institution, Dundee, 8 vo., 9 + 625 pages, cloth, $5. New York, E. P. Dutton & Co.

This book is something more than a dictionary in that, besides giving definitions of terms pertaining to medicine, it branches out and gives considerable information on the various subjects which relate to the uses of medicines, the character of diseases and their treatment, and many related facts which are not usually touched upon in the average medical dictionary. The articles on such subjects as anaesthesia, antiseptics, bacteriology, eugenics, flies and diseases, vaccination and vaccines are of this character, and they supply in concise form most of the information concerning the advances in medical knowledge the average individual wants to know. In this respect, this dictionary will commend itself to any one who wants to supplement the doctor's advice in order to carry out any directions that worthy may give.

THE QUESTION BOX

The "How to Do It" Department

CONDUCTED BY PHARMACEUTICAL EXPERTS

For the benefit of ERA Subscribers

Preserving Infusions

(J. E. M.)—"Will you kindly print the formula of a harmless or comparatively harmless preservative for infusions of botanic drugs to take the place of alcohol?"

So far as we know, no formula of this kind can be devised that will preserve infusions indefinitely and without interfering with the therapeutic action of the infusion. As a matter of common knowledge, alcohol is not generally recommended for this purpose, for if sufficient of the spirit is added to prevent decomposition, the comparatively large quantity employed carries with it therapeutic effects which may be entirely different from that of the infusion without such addition. If an antiseptic, like boric acid, salicylic acid, sodium benzoate, or phenol is employed, the same objection exists—the interference due to the therapeutic action of the antiseptic. Prof. Arny says that by the very character of preparation, no attempts should be made to preserve infusions, which should be freshly prepared as required, and the "addition of any preservative agent to infusions is out of the question. No infusion should be dispensed later than twenty-fours after making."

On the other hand Remington ("Practice of Pharmacy") states that it has been proved that infusions may be preserved for a long time if they are protected from the microscopic organisms which float in the air. A simple method is to gradually heat the infusion, contained in a bottle, to the boiling point in order to destroy any organisms that may be present, and then to transfer it at once, under proper precautions, to small bottles, which have been sterilized, filling them to the brim; the sterilized stoppers are then forced in, tied over, and the stoppers, lip, and neck of each bottle dipped into hot paraffin or sealing wax. Or the infusion may be heated to the boiling point in a bottle on a waterbath; in the neck of the bottle a perforated rubber stopper carrying a long bent glass tube and a short tube, then inserted; the short tube is loosely filled with cotton, while a rubber tube with a pinchcock is connected with the bent glass tube, the device acting as a syphon and permitting the infusion to be drawn off as wanted, the flow being controlled by the pinchcock. The cotton in the short tube permits the admission of air, but excludes organisms, spores, and dust. A preservative method of this character is not likely to prove objectionable, but the addition of any antiseptic as a preservative is contrary to the therapeutic object sought by the physician in ordering preparations of this type.

Transferring Prints and Illustrations

(M.M.)—A very weak solution of soft soap and pearlash is used to transfer recent prints, such as illustrations from papers, magazines, etc., to unglazed paper on the decalcomania principle. Such a solution is:

Soft soap	½ ounce
Pearlash	2 drams
Distilled water	16 fl. ounces

Mix. The print is laid on a flat surface, such as a drawing board, and moistened with the liquid. The paper on which the reproduction is required is laid over this, and then a sheet of thicker paper is placed on the top, and the whole rubbed evenly and hard with a blunt instrument, such as the bowl of a spoon, until the desired depth of color in the transfer is obtained. Another and more artistic process is to cover the print with a transparent sheet of material coated with wax, to trace out the pictures with a point and to take rubbings of the same after powdering with plumbago.

For transferring newspaper print make a solution of hard soap, 1 dram, glycerin, 30 minims alcohol, 4 fl. drams, and water, 1 fl. ounce. Mix and dampen the printed matter with the solution by sponging, and proceed as directed in the process given in the preceding formula.

A technical reference work states that printing ink may be loosened and rendered transferable by several substances, but probably the best are creosote, or oil of tar, and balsam of copaiba. To obtain a reversed picture, brush a plentiful supply of creosote quickly over the original print. It acts immediately, so be careful not to smear the ink by unnecessary brushing. Dissolve 1 ounce of common soda or 1 ounce of oxalic acid in 1 pint of water and moisten the paper on which the reversed impression is to appear. When the creosote has soaked well into the print, transfer by placing it downward on the damp paper and rub the back with any smooth, hard article, and a clear picture will be the result. Transparencies are made by coating the paper with a mixture of 1 part Canada balsam and 2 parts spirits turpentine instead of the soda or acid solutions, and letting it dry thoroughly before transferring the picture.

Pills of Potassium Iodide: Keratin Coating

(F.J.)—Handbooks on dispensing pharmacy suggest a number of methods for preparing potassium iodide pills, which is not such a difficult matter, if proper precautions are observed in the selection of the excipient. Some dispensers recommend to powder the iodide very finely, and then to mix it with a double weight of starch and mass with glucose. A second method directs that the iodide be dissolved in the smallest amount of warm water possible, add powdered tragacanth (about 1 part to 5 parts of iodide), and sufficient kaolin or talc to make a mass. Or, mass the iodide with anhydrous lanolin or oil of theobroma.

For pills which are to be coated with keratin some authorities state that only a fatty excipient should be employed in massing, and the pills then covered with a thin layer of cacao butter previous to applying the keratin coating. The latter is prepared in the customary manner by dissolving horn shavings in weak ammonia water after previous treatment of the shavings with ether to remove the fat. The ammoniacal solution of keratin is then evaporated until only a trace of the solvent is left. The gum-like liquid remains in the coating solution, of which several coats are imparted to the pills by rotating them in the keratin solution. At best, the process is troublesome, and some authorities say that this form of coating is not a success, Scoville ("Art of Compounding," 4th ed. 1914) stating that it "may now be dismissed as one of the delusions of the past."

On the other hand, Caspari ("Treatise on Pharmacy," 1916) states that the keratin coating method proposed by Dunning will be found entirely satisfactory. It is as follows: One gram of keratin is rubbed to a smooth paste with 6 mils (or Cc.) of spirit of ammonia and warmed, while a few drops of water, sufficient to produce a clear solution, are added. The pills do not require a coating of cacao butter, and having been made hard and dry are placed on the points of fine needles, and immersed one at a time in the solution, which is kept warm, the loss by evaporation being made up by addition of spirit of ammonia and a little water. After immersion in the solution, the pill is held in such a position that the drop forming on the under surface may be removed by a piece of cardboard, after which the needle is rotated for a few moments and then pushed through a piece of cardboard standing vertically, for the purpose of drying the pills. The minute orifice left by the needle point is subsequently closed with a little keratin solution. It is stated that this method is especially adapted to a small number of pills, 12 to 30, at the dispensing counter.

Alcoholic Strength of Pharmaceuticals

(F. A. R.)—"For a great many years I have been a buyer and dispenser of the pharmaceuticals manufactured by four of the largest houses in this country, and there is one thing that puzzles me; I refer to the variability of the alcoholic strength of their U. S. P. preparations. For instance, fluidextract of ipecac, U. S. P. IX, one sample has an alcoholic strength of 32 per cent., while another sample has 30 per cent. Fluidextract of convallaria, U.S.P. VIII, one sample has 50 per cent. another 55 per cent; fluidextract of carnabis Indica, U.S.P. VIII, one sample, 85 per cent. another sample, 80 per cent; fluidextract of frangula, U.S.P. VIII. one sample, 29 per cent, another sample. 30 per cent. The same condition exists with manufacturers' tinctures and National Formulary preparations. Why is it?"

That the percentage of alcohol in different samples of the same kind of fluidextract whether made by manufacturers or pharmacists is variable. is a well-known fact, which is not only explained by the Pharmacopoeia, but also by most of the treatises on practical pharmacy. The quantity of alcohol in finished fluidextracts made by any of the type processes is never the same as the amount of alcohol in the menstrua employed, which fact is due, among other causes, to loss of alcohol by evaporation during manufacture, to the presence of a variable proportion of water in the air-dried drug, and to the extraction from the drug of its soluble constituents, which also often vary greatly in different lots of the same drug. In any case, therefore, the actual percentage content of a given sample can only be ascertained by determination of the particular sample.

Practically the same conditions obtain with regard to the alcoholic content of tinctures. To quote the Pharmacopoeia, "it is impracticable to require an exact standard in alcoholic liquids made from drugs which contain varying proportions of moisture and extractive, and there is unavoidable loss of alcohol through evaporation during the manufacture and storage of preparations." While the U.S.P. does give a table representing the average alcoholic content of certain galenicals (mostly tinctures and spirits), it is expressly stated that allowance must be made in distillation for some loss incidental to the process, hence a tolerance of 10 per cent more or 10 per cent less than the figures given is permitted.

When the alcohol percentages of the different samples of fluidextracts named by you are viewed in the light of the above facts and this principle of tolerance, the variations noted are practically unimportant, provided, of course, that the preparations have been made from drugs answering the official descriptions and the finished products otherwise conform to the known standards. When all of these facts are considered with the deviation permitted from official processes for manufacture on a large scale, so long as the finished preparations are identical with those made by the Pharmacopoeia or National Formulary, the alcoholic content of fluidextracts and tinctures made from different lots of the same drug at different times and by different manufacturers under varying conditions, is unlikely to be constant or uniform. The alcoholic strength of a freshly made pharmaceutical preparation is rarely the same as that found on analysis of the same preparation after it has been stored for some time under the conditions obtaining in the average drug store.

Waterglass for Preserving Eggs

(R. T. B.)—The substance known as "waterglass" is an impure polysilicate, prepared by fusing together quartz, sodium or potassium carbonate, and powdered charcoal. The result is a transparent glassy mass which very slowly dissolves in boiling water. When solution is effected, the liquid can be concentrated to a syrupy consistence. The term "soluble glass" is usually applied to this thick liquid, and not to the solid itself. It is this thick solution that is used for fireproofing wood and fabrics, for making artificial stone, and for preserving eggs. For the last named purpose the thick liquid is diluted with distilled water. The eggs are generally preserved by immersing them in a liquid made by mixing 1 pound of sodium silicate solution (sp. gr. 1.4) with a gallon of water, or one can varnish each egg with the thick solution, which is then dried and packed away in boxes with other eggs to be used as required. For the liquid immersion method the best receptacles for packing are 7-lb. or 14-lb. earthenware jars, with earthen-ware lids to keep the water from evaporating.

All jobbers carry waterglass in stock, and you will probably do better to buy the material than to undertake its manufacture. It is comparatively cheap and only needs to be diluted with water to the required density before it is ready for use.

Kinectine is a compound of quinine with hectine—quinine benzo-sulpho-para-amina-phenylarsonate. It is recommended in feverish conditions.

Stannoxyl is a preparation containing pure tin oxide, recommended as a remedy for boils. The dose is 0.5 to 1.0 gram. In some parts of France powdered tin is a popular remedy for boils, and this preparation is said to have a powerfully destructive action in staphylococcus infection.

The Progress of Pharmacy

Detection of Cider in Wine—

Fifteen Cc. of the wine is shaken with a few Cc. of concentrated sodium nitrite solution; pure wines give a bright yellow or yellowish-brown coloration, while cider or perry is colored dark brown or brownish-black and a brownish-black precipitate separates. This precipitate is insoluble in water, alcohol, ether, etc., but dissolves in alkali solution giving a red solution. Wines when treated with both sodium nitrite and potassium hydroxide give a yellow coloration, while cider and perry and mixtures of the same with wine yield a pure red coloration. (*Chem-Zeit.* through *Jour. Soc. Chem. Ind.*)

Antiseptic Value of Essential Oils—

Cavel reports the examination of forty-five essential oils to determine the limit dose (in parts per 1,000) necessary to be added to gelatin bouillon to prevent all microbic vegetation. The examination showed that even after seven months, when the plates were inoculated with a sewage effluent containing 9-11 million germs per Cc., the amounts required varied from 0.7 parts per 1,000 in the case of thyme oil up to over 15.0 parts per 1,000 in the case of patchouli oil, the value, under similar conditions, for phenol being 5-6 parts per 1,000 (*Comptes rend.*).

Determination of the Purity of Castor Oil—

Chercheffsky proposes the following method for the determination of the purity of castor oil which depends on the critical temperature of solution of the oil in ethyl alcohol (sp. gr. 0.8431 at 15° C.) Ten drops of the oil and 40 drops of the alcohol are placed in a tube 10 cm. in length and 6 to 8 cm. in diameter, and the open end of the tube is then sealed hermetically. The tube is placed in an oil or glycerol bath and the temperature of the latter is raised gradually until the curved meniscus between the oil and alcohol layers becomes flat and horizontal. The contents of the tube are now mixed without removing the tube from the bath and this is allowed to cool slowly. The temperature at which the mixture becomes permanently turbid is noted. In the case of pure castor oil this point lies between 66° and 67° C.; with other oils it is much higher, namely, rape oil, 202°, earthnut (arachis) oil, 197°, cottonseed oil, 172°, linseed oil, 163°, and fish oil, 167° C. The presence of 2 per cent of any of these oils in castor oil raises the turbidity temperature of the latter to 69°-71° C. (*Ann. Chim. Analyt.*, through *Jour. Soc. Chem. Ind.*)

Yield of Oil of Spearmint—

The cultivation of spearmint is conducted extensively for the production of the volatile oil, which is used largely for the flavoring of chewing gum. Rabak reports in a recent issue of *J. Ind. Eng. Chem.* an interesting series of experiments undertaken by him to determine the influence of time of harvest, drying and freezing of spearmint upon the yield and odorous constituents of the oil, the experiments being conducted through a period of years in which the plants were harvested and distilled at three distinct stages of growth, namely, budding, flowering and fruiting stages. He finds that no definite relationship exists in the yields of oil from the fresh herb at any stage of growth during the several seasons, the yield varying with the season and the period of growth. The yield is highest during flowering, and the tops of the plant then contain the highest proportion of oil. The yield of oil from the fruiting plants is uniformly low, while those from the dried plants during any stages of growth are lower in practically all cases than that of the fresh herb, the effect of the drying being to reduce the yield of oil and to increase the proportion of alcohols and esters in the oil. A similar tendency to increased formation of alcohols and esters in the oil is observed as the plant matures, while freezing of the plant promotes the formation of the odor-bearing constituents.

Irish Moss as Food—

Under the title "chondrus," Irish moss is official in the U. S. P. and other pharmacopoeias, being a demulcent and at one time largely employed in the treatment of chronic pulmonary and bronchial affections and in disordered conditions of the intestinal tract. Recently the Dundee Food Control Committee has had its attention directed to the value of this product as a food, and according to Consul H. Albert Johnson, of Dundee, Scotland, it has been decided to bring the matter to the attention of the Food Ministry, in order to consider what might be done toward popularizing the substance as an article of diet. He states that carrageen is known in various parts of Scotland under the name of "hen's dulse." It grows abundantly on rocks and stones within the littoral zone, flourishing in salt water which has a dash of fresh in it. In its natural state it has the appearance of dwarf dulse, the small flag being soft and cartilaginous, and in color it ranges from a greenish yellow to a purplish brown. When picked and sun dried it becomes translucent and of a horn-like consistency. Among the poorer classes in Scotland it is boiled in water until it assumes the consistency of porridge and is served in a like manner with milk. It forms a jelly in about 20 to 30 times its weight in water, but is more commonly used in making various kinds of puddings. Other purposes for which it may be utilized are fining beer and in connection with calico printing. It has 55 per cent of mucilaginous matter, 10 per cent albuminoids, and 15 per cent mineral, being rich in iodine and sulphur.

This seaweed is often confused with several others which have been used as food by the Scottish people, but neither in its natural nor its prepared state has it any resemblance to these. There is little doubt that carrageen, if methodically collected and properly used, would help in augmenting the national food supply. In the bays and creeks on the west coast of Scotland the weed grows profusely, but the labor of collecting it in marketable quantities is great. On the east coast it can be found in any of the inland bays, and on the coast generally. It can be picked up on both sides of the Tay.

NEW REMEDIES

Chlorazene is the sodium salt of paratoluene sulphochloramine; it occurs as a crystalline, colorless powder, and is used as an external antiseptic.

Eucupine, or isoamylcupreine, is a white inodorous powder, insoluble in water, slightly soluble in alcohol and ether; it is employed as a substitute for cocaine.

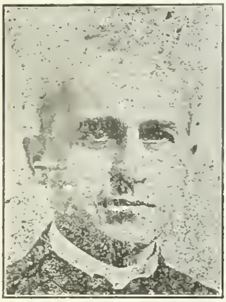
Quinocol is a tablet preparation containing 2 grains of thiocol, and 2 grains of extract of Piscidia Erythrina.

Rhodoform, or urotropine thiocyanate, occurs as a brownish, inodorous powder, melting at 143° C. It is used as a dental antiseptic.

Septovincine, or trichloracetyl di-iododiphenol, sometimes called iodal, is a new antiseptic of low toxic power, prescribed with glycerin as an external application, or used as a hypodermic injection, for rheumatism, erysipelas, etc.

(Continued from page 240)

Congress Hotel, where a large number of delegates found lodgings and which served as association headquarters during the week. The sectional meetings were well attended, although it was not possible for any delegate to attend all of them, owing to the arrangement of the program which provided that some sections should meet concurrently. However, the members selected the meetings in which they were most interested, and let it go at that.



E. G. Eberle,
Journal Editor

William B. Day,
Gen. Sec., A. Ph. A.

First General Session

The first general session was called to order by Dr. A. R. L. Dohme, first vice-president, upon whom fell the duties of presiding, owing to the death of Charles Holzhauer, of Newark, N. J., who was elected president last year. In opening the proceedings, Dr. Dohme called attention to the marvelous growth of the association in the last quarter of a century.

Following responses by Dr. L. Zembach, of the U. S. Navy, and Dr. L. F. Kebler and C. O. Ewing, of the Bureau of Chemistry of the United States Department of Agriculture, Washington, C. E. Mathews, chairman of the Entertainment Committee, made announcements relating to the entertainment provided for the visiting members and delegates. Calling Vice-president Seltzer to the chair, President Dohme then read his annual address in which, among other things, he discussed the funds of the association, the aggregate of which on January 1 of the present year amounted to $67,831.47. Only two of them, the Centennial Ebert and the Procter Funds, have specific purposes and can be and are at times used for an intended purpose. The other funds are either mementos or provisions for the future, bearing interest, which was very small but serving practically no useful purpose, and for this reason the funds should be reinvested in securities that are safe but yield a better interest return. The principal part of the address was devoted to the federation of pharmaceutical organizations, and this will be found printed elsewhere in this number of the Era. The address was referred to a committee consisting of Dr. Wm. C. Anderson, J. A. Koch, H. P. Hynson, J. C. Peacock and T. J. Bradley.

The following committee on resolutions was appointed: S. C. Henry, J. H. Beal, Jeannot Hostmann, O. F. Claus, W. C. Anderson, Clair A. Dye, J. W. England, Jacob Diner, F. J. Walling and S. L. Hilton.

According to an established custom, a recess was declared to enable the various State delegations to elect members to the Nominating Committee, which organized by electing S. C. Henry as chairman, and S. L. Hilton as secretary. This committee later reported the following nominees for the several offices, three nominees for each office, the members to cast their votes by mail before the end of this year:

Nominees for president—Prof. L. E. Sayre, Lawrence, Kansas; Leonard A. Seltzer, Detroit, Mich.; Prof. H. V. Arny, New York.

Nominees for 1st vice-president—Prof. T. J. Bradley, Boston; Prof. A. H. Clark, Chicago; W. H. Rudder, Salem, Ind.

Nominees for 2nd vice-president—Harry Whitehouse, Johnson City, Tenn.; John Culley, Ogden, Utah; Miss Zada M. Cooper, Iowa City, Ia.

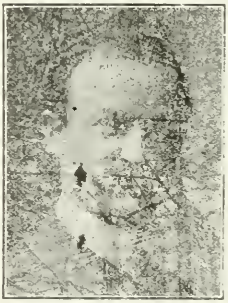
Nominees for 3rd vice-president—Dr. Jacob Diner, New York; Prof. E. Fullerton Cook, Philadelphia; Adolph Umenhofer, Chicago.

Nominees for members of the Council (three to be elected)—J. H. Beal, R. A. Lyman, E. H. Thiesing, S. L. Hilton, Wm. Mansfield, C. H. LaWall, H. B. Mason, W. J. Teeters, and Clyde M. Snow.

Second General Session

The proceedings of the second general session of the association were largely devoted to routine matters, such as reports from various committees, communications, etc. Letters of greeting were received from the Women's Organization, N. A. R. D., and from Mrs. Fletcher Howard, of the Ladies Council, California State Druggists Association.

President Dohme stated that a letter had been received from a gentleman in France representing the pharmacists of that country, particularly those who had been deprived of their homes, their business, and their income and property in the devastated districts. President Dohme stated that the first consideration of the association was to determine whether the organization wished to take the lead in securing a fund of money for the French pharmacists who had been deprived of their living, with the understanding that the fund was to be repaid by the French pharmacists as soon as the latter were able to do so. It was stated that the plan met with the approval of the French Ambassador, Mr. Jusserand.



Dr. Wm. Mansfield,
V. P., A. C. Ph. F.

J. H. Rehfuss,
N. A. B. of Ph.

After some discussion, attention was called to the condition of pharmacists in other war zones, particularly those of Belgium, and to whom relief should be extended. As a result of this discussion, the president was authorized to appoint a committee to take steps toward establishing a fund for the relief of all pharmacists in the stricken war zones.

Following the report of Treasurer Whelpley, reports were received from the Committee on Compulsory Life

Insurance, the Committee on President's Address, the Committee on the Revision of the Constitution and By-Laws, and the Committee on Physiological Testing. The report of the Committee on Status of Pharmacists in the Government Service was read by the chairman, S. L. Hilton, of Washington, who said that what the association is demanding is a Pharmaceutical Corps to be composed of pharmacists who are trained, educated, and who are professional men. The association was not working to have every licensed pharmacist taken into the Army or Navy entitled to a commission.

Mr. Hilton's report stated that during the year the Committee had confined its endeavors to trying to obtain Congressional legislation to establish a Pharmaceutical Corps in the Army, concentrating its efforts upon the single proposition that we would be performing a war service for the men fighting for the country by placing the dispensing of medicines in the hands of trained, competent pharmacists, instead of, as at present, in the hands of the unskilled. The results, he reported, are far from satisfactory, but the outlook is not hopeless. There was a fighting chance, and the association must fight and fight continuously that the object might be attained.

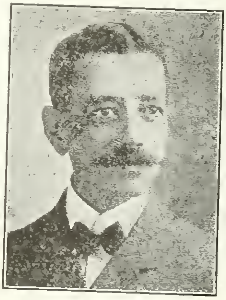
The report gave an account of the hearing on the Edmonds bill, held early in the year at Washington, before the Committee on Military Affairs, and with which most readers are already familiar. It was the opinion of those present at the hearing that a very favorable impression was made on the Committee. So far, the Committee on Military Affairs had done nothing with respect to considering or reporting its conclusions, and from what Mr. Hilton was able to learn, the bill may not be further considered or reported at this session of Congress. It looked as though if anything was to be accomplished, the opposition of the Surgeon-General must be overcome.

How this opposition of the Surgeon-General is to be overcome, the report stated, is problematic and difficult to predict at this time. "Surgeon-General Gorgas retires this Fall; who his successor will be and what his position is cannot be predicted. We feel that now is the time that all drug industries must co-operate in a united endeavor in support of this measure. The future of pharmacy largely depends upon taking this step. The medical, dental and chemical professions have taken this step; they are listened to and usually obtain what they desire. This is illustrated by the formation of the Chemical Warfare Service, by executive order, and this could have been done at least for the period of the war, if the pharmaceutical profession had been fully and as well organized as the other professions."

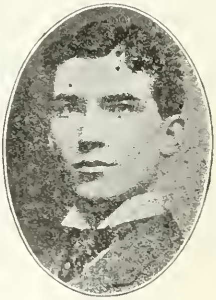
Continuing, the report stated that "close contact with men of authority in the Medical Department usually elicits the information that the pharmacists are not wanted, they know too much, that they want men without pharmaceutical training, so that they can train them as they desire. The younger men in the medical service want the pharmacist but they have not the power to overcome the opposition, and as a result, our soldiers suffer because they are not getting the best pharmaceutical service obtainable and thousands of trained pharmacists are working in the trenches and along other lines different from those for which they are best fitted and educated. This lack of co-ordination is not only detrimental to the army but is wasteful of an important and national asset.

"In closing we want to urge that the American Pharmaceutical Association take the initiative and call on all drug organizations to take an active part and to use its utmost endeavor to convince the Surgeon-General and Secretary of War, of the urgent necessity of establishing a Pharmaceutical Corps, thereby eliminating the necessity for as large a number of physicians as is now being called for and which will, beyond all question of doubt, work a hardship on those remaining at home, and that the men in the army will get better service than they are receiving at present.

"We urge that every member of these pharmaceutical associations work with their Congressman, pointing out the conditions now existing, show the necessity for such a Corps and demand legislation providing for a Pharmaceutical Corps along the lines that have been worked out and proven most satisfactory in foreign armies."



S. L. Hilton,
V. Ch., House of Del.



E. F. Kelly,
V. Ch., House of Del.

The report was discussed by Prof. L. E. Sayre and Dr. Wm. Mansfield, and it was voted that the paper and the discussion be printed in the Association's publication and that 5,000 copies be re-printed and sent to the various colleges and to those persons who have the facilities for sending the report to the pharmacists of the United States An attempt will also be made to secure the publication of the report in as many newspapers as possible.

Copies of the report of the Committee on United States Pharmacopoeia, read by Dr. L. F. Kebler, were ordered sent to the United States Pharmacopoeia Revision Committee. In the absence of Dr. Hancock, chairman, the report of the Committee on Procter Memorial Fund was read by Secretary Day and referred for publication. This fund on Jan. 1, 1918, amounted to $8,486.20, and was created to construct a monument to Wm. Procter, Jr., the "Father of American Pharmacy."

Other reports presented were from the Joint Committee on Nomenclature of Cultivated Plants, H. H. Rusby, chairman; from the Committee on Weights and Measures; the Committee on Pharmaceutical Syllabus; the Committee on Model Pharmacy Law, the committee on Closer Federation of Pharmacists and Physicians, and the report of the delegates to N. W. D. A.

Secretary Day reported that the fifth volume of the Year Book had been distributed, and although it had been reviewed in all the pharmaceutical journals, the sale to non-members had been small. The sales of the National Formulary fell below those of the preceding year, 6,523 copies being sold in 1917 and yielding an income of $10,973.08. The total sales of the N. F. IV, June 1, 1918, amount to 23,481 copies with a gross income of $41,083.50. He also gave an itemized statement of the expenditures covering the publication of volumes 3, 4, and 5 of the A. Ph. A. Year Book and the sale of badges and bars during the year.

Dr. A. R. L. Dohme was elected a member of the Council to fill the vacancy caused by the death of the late Charles Holzhauer.

Third General Session

The final session was held on Saturday morning, the proceedings being largely devoted to the reports of the House of Delegates and the Committee on Federation. The latter report related what the Committee had done and that the work accomplished had not been as great as some of the members desired, but that one step toward federation had been made by starting a movement to enlarge the scope of the National Drug Trade Conference so that it would be more efficient in promoting the general welfare of scientific and commercial pharmacy.

The Federation Committee reported in favor of amending the by-laws so that all voting delegates to the House having the right to vote shall be members of the A. Ph. A., and that it was the sense of the Committee that the continuation and strengthening of the House of Delegates and the active exercise of its functions present a great opportunity for the furtherance of the federation of pharmaceutical organizations, the better co-ordination of such organization in national and state affairs, and for the proper development and evolution of pharmacy. Other recommendations were to transfer the reception of fraternal delegates from other pharmaceutical and allied organizations or from departments of the United States Government from the General Sessions to the sessions of the House of Delegates; to abolish the Committee on Resolutions of the Association and to transfer its functions to similar committees of the House of Delegates; also to transfer the reports of the Committees on U.S.P. and N.F., Patents and Trademarks, Commission of Proprietary Medicines, etc., from the General Sessions to the House.

The Committee on Federation recommended that it be continued for another year. The recommendations were adopted, as also a recommendation that the dues of members serving in the Army or Navy may be suspended during the period of the war, providing that such members do not desire the Association's publications.

The Committee on Revision of the Constitution and By-Laws proposed a number of amendments to the by-laws which provided for ten members each on the committees on U.S.P., transportation, and research, and seven members on the committee on pharmaceutical syllabus, their respective terms of service in each case being named. The proposed amendments were adopted.

The following resolution, introduced by Dr. Anderson, was adopted:

Whereas, Botanical names are essentially foreign in origin and form and should be dealt with according to the rules of the language to which they pertain;

Resolved, That in the opinion of the American Pharmaceutical Association the Joint Committee on Nomenclature should drop the final "i" of specific botanical names which retained them in accordance with such rules.

The next order of business was the installation of the new officers. President Dohme in introducing President-elect LaWall made a short address in which he said that the question of federation constitutes a very important and serious matter concerning the future welfare of pharmacy. The idea had been favorably received in all quarters, and he believed that one could look forward to 1919 as a constructive year, for some real accomplishment in pharmacy, particularly as it is hoped during the year to get the State associations more or less integrally and enthusiastically connected with the A. Ph. A. He then gracefully referred to Prof. LaWall as a man of ideals and a man with the courage of his convictions, and one who would direct the "ship into channels which will open up great fields of beautiful progress and successful advancement during the year to come."

Prof. LaWall in accepting the presidency said he was sensible of the honor that had been conferred upon him and he would try to pilot the A. Ph, A. so as to avoid the rocks which beset the passage of every vessel going through such times as we are now confronting. He would use every effort to attain the ideals for which the association is striving and to bring about the consummation of the plan already begun.

Then followed the installation of the remaining officers-elect and the adoption of a special vote of thanks to the retiring officers for their splendid constructive work during the year, particularly to President Dohme, and to the Committees on Entertainment and the ladies of Chicago for their entertainment of the delegates to the convention.

Entertainment

The Entertainment Committee headed by Charles E. Mathews as chairman, presented a program with which no fault could be found. There was something doing every minute during Convention week. First came the President's reception held in the Gold Room of the Congress Hotel, the procession being led by Mr. and Mrs. Thomas H. Potts. This was largely attended, the guests being introduced by Prof. W. B. Day. After the reception there was dancing. On Tuesday afternoon the visitors were tendered a luncheon at the end of the Municipal Pier which extends far out into Lake Michigan, while later in the day there was a card party for the visiting ladies. On Wednesday there was a luncheon for the various alumni organizations, which was well attended, more than a hundred alumni being present. President Dohme acted as toastmaster, and speeches were made by Prof. W. B. Day, Prof. C. H. LaWall, Prof. Theodore J. Bradley, and Prof. H. P. Hynson. On Friday evening a banquet was given in the Gold Room of the Congress Hotel at which James W. Morrisson, of the Fuller-Morrisson Co., Chicago, and former president of the N. W. D. A., served as toastmaster. The speakers were Dr. A. R. L. Dohme, president, Prof. Chas. H. LaWall, president-elect, Harrison B. Riley, president of the Chicago Title and Trust Co., and Dr. W. A. Evans.

HOUSE OF DELEGATES

The House of Delegates held three sessions, Chairman S. C. Henry presiding. The most important business considered by this body was that relating to the report of the Committee on Federation, appointed in accordance with the recommendation made last year in the address of President Wulling, the committee consisting of H. V. Arny, C. E. Caspari, C. H. LaWall, W. A. Hoover, F. J. Wulling, J. H. Beal, J. U. Lloyd, S. C. Henry, A. R. L. Dohme and W. B. Day.

Chairman Arny related how the committee was organized and summarized its work by stating that it was not as great as was desired by some of its members. One step toward federation was made, however, by starting a movement toward the enlargement of the scope of the drug trade conference, by which it is hoped that a broad federation of national drug organizations will be secured. It will make another advance, the chairman stated, if the plan of federation of State associations in the House of Delegates is strengthened by the adoption of the resolutions which the committee submits.

These resolutions proposed that the by-laws of the House of Delegates should be so amended that all delegates to the House shall be members of the A. Ph. A. at the time they serve; that the continuation and strengthening of the House and the active exercise of its functions present a great opportunity for the furtherance of the federation of the efforts of such organizations for the better co-ordination of the organizations in national and state affairs, and for the proper development and evolution of pharmacy; that the recommendations made by Chairman J. H. Beal last year proposing five additions to the functions of the House be adopted, and that the Committee on Federation be continued for another year.

These resolutions were discussed at the second session of the House and later adopted with the provision, that delegates appointed to the House will have the privileges of the floor but no vote, unless they are members of the A. Ph. A. at the time they serve.

At the third session Secretary Hostmann read a communication from the Council recommending that the House of Delegates discuss the subject of combination dues of the A. Ph. A. and the State associations, the latter collecting the combined dues and remitting to the A. Ph. A. its portion of such dues. The object of such a procedure was to bring the State association into closer touch with the A. Ph. A. through such joint action. On vote the House approved of the proposition with the request that the delegates from each State association should bring the matter up before their respective organizations for action and discussion at the next annual meeting.

The following officers were elected: Chairman, Dr. Otto F. Claus, St. Louis; 1st vice-chairman, Samuel L. Hilton, Washington, D. C.; 2nd vice-chairman, E. F. Keily, Baltimore; recording secretary, Dr. Jeannot Hostmann, New York.

EDUCATION AND LEGISLATION

In the number of papers presented and the wide diversity of their titles, as also in the character of the discussions which followed, the program offered by the Section of Education and Legislation was equal if not superior in interest to the proceedings of any of the sectional meetings held during the week. Chairman C. B. Jordan read an address, and the report of the secretary was presented by W. F. Judd.

Among the reports and papers presented were the following: Dr. F. E. Stewart, "Report of the Committee on Patents and Trade-marks;" Dr. C. S. Case, "Is Research Work Along Lines Suggested by the Last Revision of the U. S. P. Possible and Practicable in Schools of Pharmacy?" Prof L. E. Sayre, "What is the Meaning of a Degree in Pharmacy?" Dr. L. F. Kebler, "The District of Columbia Advertising Law, Its Enforcement and Some Results;" Dr. A. B. Stevens, "The Pronunciation of Pharmaceutical Latin;" Dr. H. H. Rusby, "What Shall We Teach?"

The report of the Committee on Regulation for the Transportation of Drugs by Mail, prepared by B. L. Murray, chairman, was read by Secretary Rudd and referred for publication.

After the Nominating Committee had presented its report at the second session, Prof. Freeman P. Stroup read a paper on "Chemical Theory—A Practical Method of Teaching," and papers were read by title from Caswell A. Mayo on "Instruction of Pharmacists for War," and Dr. W. E. Emerson on "What Should be the Attitude of the Profession Toward Further Restriction in the Sale and Use of Alcohol."

Dr. F. W. Shepardson read a paper on "Plan of Civil Administrative Code of Illinois in its Relationship to the Pharmacy Act." After the reading of the paper the chairman expressed his regret that the paper had not been read before the Conference of Pharmaceutical Faculties. In the discussion which followed, Frank H. Freericks of Cincinnati challenged the statement that one reason of the failure to establish a pharmaceutical corps in the U. S. Army was that the pharmacists cannot lay claim to education; that his standing is that of a merchant and not that of a professional man, stating "it places somewhat of a wrong construction upon the entire situation. It seems to me that the matter should be regarded in the practical light. Medicine today has that much desired recognition in the Army and we must take the man in medicine as he is, and by way of comparison we must take the pharmacist as he is today. I venture to say that when you take 50,000 pharmacists of this country and set them up against 150,000 to 200,000 medical men in this country you will find proportionately as many educated men in pharmacy as you will find in medicine, and I think it is unfair to say that pharmacy should not be recognized for that reason. I do not believe it is right that there should go out of this organization and with the approval of this association a feeling on our own part that pharmacists as a whole in this country are not as good as the medical men. I do not believe it. I think it is wrong."

Isam M. Light,
Com. Section

Dr. O. F. Claus,
Ch., House of Del.

Dr. R. A. Lyman, of Lincoln, Neb., stated that he feared the words of Mr. Freericks were apt to create a feeling between medical men and pharmacists. "I think Mr. Shepardson has hit the nail on the head when he has said that the teachers of pharmacy in the colleges of America have a very low idea of the practice of pharmacy as a profession, and I think he is exactly right when he places the blame upon the pharmaceutical educators, and I for one thank him for his nerve to come here and make that statement before us. He is a man from the outside, and that expression of opinion from Illinois will do the pharmaceutical educators of America a whole lot of good and indirectly be responsible for improving our professional standing."

Dean F. J. Wulling said: "Dr. Lyman's statement that pharmaceutical educators are responsible for this ought to be modified. If he would say a faction of our pharmaceutical educators are to blame, I would agree entirely. There is another faction of pharmaceutical educators who feel that they have been working towards these higher aims and ideals against great odds, and they have accomplished something in face of these odds. We are all thinking along the same lines and these are upward lines." The paper was referred for publication.

On the program which followed were the following papers: Dr. J. H. Beal, "Health Insurance Legislation;"

Dr. Nellie Wakeman, "The Teaching of Plant Chemistry;" Dr. L. F. Kebler, "Some Protection and Education Afforded by Certain Postal Laws;" Dr. W. G. Gregory, "Entrance Requirements to the Practice of Pharmacy;" Dr. F. J. Wulling, "So-Called Commercial Pharmacy Should not be Taught in Colleges of Pharmacy;" Frank H. Freericks, "The Future of Pharmacists now in the Army and Navy." Mr. Freericks was asked to bring his paper up for discussion in the joint conference.

The closing session of the Section was in the nature of a joint conference of the representatives of the Conference of Faculties and the National Association of Boards of Pharmacy. Secretary T. J. Bradley presented a report of the American Conference of Faculties, and then Chairman Jordan called on Dr. F. E. Stewart for his paper on "How can the State medical and pharmaceutical boards jointly co-operate with the authorities having charge of the enforcement of the National and State pure food and drug laws for the purpose of proper control over the preparation, distribution, purity and sale of drugs?"

Reports of the annual meeting of the National Association of Boards of Pharmacy and of the Committee on Draft of Modern Pharmacy Laws were presented by Secretary Christensen and Frank H. Freericks respectively. E. G. Eberle presented the report of the Committee on the Fairchild Scholarship, and Dr. R. A. Lyman offered the report of the Committee on Higher Educational Standards, moving that it be received, that it be regarded as expressing the sentiment of the Joint Session, and be referred to the secretary of the Conference for publication in the proceedings. Dr. W. C. Anderson protested against the motion, and moved that the report be received and referred for publication. He said, "I absolutely object to having a report of this kind with a number of recommendations and have the chairman of the committee move to have it be considered the sentiment of this organiation, which would be adopting these resolutions which have not been presented to the body."

The following officers were elected: Chairman, Prof. W. F. Rudd, Richmond, Va.; secretary, Prof. C. A. Dye, Columbus, Ohio; associates, Dr. William Mansfield, Albany, N. Y.; Prof. E. L. Newcomb, Minneapolis, and W. H. Ziegler, Charleston, S. C.

SCIENTIFIC SECTION

Owing to the absence of W. W. Stockberger, chairman, and H. C. Fuller, secretary, Dr. Edward Kremers was chosen as temporary chairman, and Dr. A. G. DuMez as temporary secretary of the Scientific Section, which held its first session on Wednesday morning. Dr. DuMez read the address of the absent chairman, and Drs. A. H. Clark, Charles H. LaWall and W. J. Teeters were appointed as members of the Committee on Nominations. Then followed the reading of reports and papers, including the following: Report of the Committee on Quality of Medicinal Products; Report of the Committee on Drug Cultivation, prepared by W. W. Stockberger; "Effect of the War on Drug Importation," C. O. Ewing; "Couch Grass vs. Bermuda Grass," E. N. Gathercoal; "Histology of Brazilian Jalap," O. A. Farwell; "Piptostagia Pisonis; Brazilian Jalap," C. O. Ewing; "Research and the United State Pharmacopoeia," Dr. A. H. Clark; "Variations in Cinchona Bark and its Preparations," Hugo H. Schaefer; "Assay of Hypophosphites," J. K. Dickerson.

At the second session papers were presented by Dr. B. Fantus on "Tablets for the Disinfection of Drinking Water;" R. P. Fischelis on "Tethelin," Dr. L. F. Kebler on "Analysis of Tablets of Unknown Composition," and R. B. Carter on "Commercial Cultures of Bulgarian Bacillus."

At the third session F. R. Eldred presented the report of the Committee on Ebert Prize, stating that the quality of the papers did not warrant the awarding of the prize this year.

E. L. Woodhams presented a paper on the "Commercial Growing of Some European Drugs in Michigan," in which he pointed out some of the difficulties connected with drug culture in that State, stating that the prime cause of discrepancies in the analysis of these drugs was principally in the method of selection of the sample from the bulk goods which it is to represent. As to future work, the author stated that he did not believe the small farmer would go into the culture extensively, as it required too much capital, and also on account of his unwillingness to enter a new field. If American drug houses would demand a higher quality of drugs, the American drug growers would survive after the war.

Dr. C. O. Ewing gave an illustrated lecture "Description of a Trip Through the Drug Raising Area of the South," some forty views being shown. He was followed by Dr. Jacob Diner who read a paper entitled "Criticisms and Comments of the N. F. IV," in which he emphasized the fact that if it was desired that the physician should make use of the Formulary, it was advisable to reduce its volume, simplify and standardize the formulas, and thus make the book scientifically unassailable. Other papers read were by Dr. L. F. Kebler, "Nitrogen, a Dominant Factor in the Affairs of Man;" Dr. Paul S. Pittenger, "The Effect of Alcohol on the Activity of Liquor Hypophysis," and "Deterioration of Tincture of Digitalis," and by Dr. Curt P. Wimmer on "Some Experiments on Rhythmic Precipitation," the last paper being illustrated by a number of lantern slides showing crystal formations.

The following officers were elected: Chairman, E. N. Gathercoal, Chicago; 1st vice-chairman, C. B. Jordan, Lafayette, Ind.; 2nd vice-chairman, C. O. Ewing, Washington, D. C.; secretary, Hugo H. Schaefer, New York.

PRACTICAL PHARMACY AND DISPENSING

The first number on the program of the Section on Practical Pharmacy and Dispensing was the address of Chairman J. C. Peacock, of Philadelphia, who referred to the organization of the Association sixty-six years ago, and said that the object of the founders is still the object of the present membership, and that their spirit has always been and must remain the spirit of the association. Referring to the attempt to secure better recognition of pharmacists in the Government service, he said it is incumbent upon us to declare that pharmacy must be further explained for a better comprehension of it by the people of the country, for we need the appreciation of the public to help us help the Nation's warfare by promoting the soldier's welfare. The present, he said, was also propitious for the pharmacist to show his individuality by remembering that his hours to be open need not be influenced entirely by another's actions. An hour or a half hour taken from each end of the day will, to that extent, help to conserve the health and strength of those in the store, as well as supply the encouragement of shorter hours to all. Regarding the conservation of alcohol, glycerin and sugar, the best interests of the public can be served by allowing pharmacists a sufficient supply of these materials for all pharmaceutical purposes before any other use is contemplated. So far, the Harrison Narcotic law had been accepted as a satisfactory first step in a worthy effort, and that its application will hasten the obsolescence of some of the compound opiates of the National Formulary.

Space will not permit the enumeration of the numerous titles of the papers read at the three sessions of this Section, but collectively they covered a wide field of investigation and pharmaceutical endeavor.

The following officers of the Section were elected: Chairman, R. W. Terry, Groveport, Ohio; secretary, Edward Davy, Columbus, Ohio; associates, I. A. Becker, Chicago, and William Gray, Chicago.

COMMERCIAL INTERESTS

The programme of the Commercial Section started off with the address of Chairman Robert P. Fischelis, Dr. H. H. Schaefer acting as secretary. "Commercial Training in Colleges of Pharmacy," by E. Fullerton Cook, of Philadelphia, and "A Square Peg in a Round Hole," by Charles W. Holzhauer, of Newark, N. J., were the titles of two papers presented, the reading of which was followed by a discussion participated in by Messrs. Diner, Holzhauer, Mason and Selzer. A. W. Figgis, of New York, read a paper entitled "Repetition Makes Reputation," and Dr. A. R. L. Dohme presented one on "Conservation in Pharmacy." The last named paper was followed by discussion, a recommendation by resolution being made to the Council to appoint a Conservation Committee of the Association. A paper on a related subject, "Conservation of Crude Drugs," was read by Dr. Hugo H. Schaefer of New York, and this, also, developed some discussion, with the result that a motion was passed requesting the Revision Committee, if within its power, to issue a supplement to the Pharmacopoeia covering the various points that may be considered of importance at an early date, if possible during this year.

Another resolution of the same general report, introduced by Dr. Fischelis, was adopted, as follows:

Resolved that it is the sense of the Commercial Section of the A. Ph. A. that steps should be taken by pharmacists everywhere to conserve material entering into the manufacture, packing and distribution of pharmaceutical and biological products, and

Resolved further that the return of drugs and merchandise for credit, especially biological products, which are so urgently needed for the conservation of the health of both the military and civil population, be discouraged, and steps be taken to prevent the reckless ordering of these products in quantities greater than actually needed.

Other papers read were: "The Advance by Kilometers," by Dr. H. V. Arny; "Advertising Pharmacy to Pharmacists," by J. C. Peacock; "The Appearance of a Package and Its Contents as a Factor in Merchandising," by F. W. Nitardy.

The following officers were elected: Chairman, E. Fullerton Cook, Philadelphia; secretary, H. S. Noel, Indianapolis; associates, Hugo H. Schaefer, New York; J. H. Rehfuss, Brooklyn, N. Y., and I. M. Light, Chicago.

HISTORICAL SECTION

This Section was in charge of the chairman, Prof. L. E. Sayre, of Kansas University, and Secretary Hugo Kantrowitz, of New York. Following the address of the chairman, and the reports of the secretary and Historian E. G. Eberle, of Philadelphia, a paper was read by Frederick L. Lewton, curator of the Division of Textiles, United States National Museum, Washington, relating to the definite recognition of pharmacy, the author stating that there was to be a distinct section on Pharmacy, which was to be placed on an equal footing with medicine, and not subordinate to it.

Dean Wulling in discussing Mr. Lewton's paper said that any step taken in connection with the matter met his hearty approval, and it would be wise and an opportune advantage that the offer to recognize pharmacy in this manner should be accepted quickly and without question. A great advantage to be derived from such a collection would be the manner in which the collection would be demonstrated by the Institution, and great profit would grow out of the project for the benefit of both A. Ph. A. and the Museum.

Dr. Henry Kraemer expressed himself as being gratified that a representative of the National Museum was present and also gratifying to the Association to have secured the co-operation of the Institution. He said that the Association should now begin to systematize on this subject along other lines. At the conclusion of the discussion a motion was made and carried that the Smithsonian Institution be asked to have a representative at the meeting of the A. Ph. A. each year.

Among the interesting papers presented to the Section were: "History of Glassware—Ancient and Modern," by W. W. Figgis, of New York; "Origin of Some Pharmaceutical Associations," and "Recollections of How the First Narcotic Law in Illinois Originated," by Wilhelm Bodemann, of Chicago; "Physiological Standardization; Historical and Descriptive," by Herbert G. Hamilton, Detroit; and "A Talk on Ebert, Hallberg and Oldberg," by Dr. H. M. Whelpley, of St. Louis, the last named being illustrated by lantern slides.

Miss A. G. Bagley,
Pres., Women's Section

Miss Bertha Ott,
Historian, Women's Sec.

The officers elected are: Chairman, Hugo Kantrowitz, New York; secretary, Prof. W. O. Richtman, Madison, Wis.

WOMEN'S SECTION

Two sessions of the Women's Section were held, Miss Zada M. Cooper, of Iowa University College of Pharmacy, presiding. Including the president's address, most of the papers presented related to the various activities of women in pharmacy. Mrs. Hulskamp read a paper on "Women Pharmacists," and Miss Harriet E. Vittum discussed the "Present Day Opportunities of the Women Citizens of America," the author receiving a vote of thanks for her interesting contribution.

Mrs. Kenaston, as chairman of the Committee on Revision of the Constitution, presented a draft of the by-laws which are to take the place of the former constitution and by-laws under which the section has been working. The by-laws were adopted with the exception that the honorary president is to be elected each year according to the plans of the original constitution.

At the second session Dr. A. R. L. Dohme read a paper on "The Woman of Tomorrow," and Dr. L. F. Kebler, chief of the Drug Division, U. S. Department of Agriculture, gave an illustrated lecture on "Community Work in Conserving Cereal Foods and Protecting the Public Welfare." Other papers were read by Mrs. Christensen and Miss Stauffer.

Officers elected: President, Miss Anna G. Bagley, Columbus, Ohio; 1st vice-president, Mrs. W. L. Dewoody, Pine Bluff, Ark.; 2nd vice-president, Mrs. F. J. Wulling, Minneapolis; 3rd vice-president, Mrs. F. W. Meissner, La Porte, Ind.; secretary-treasurer, Mrs. Jean McKee Kenaston, Bonesteel, S. D.

ASSOCIATION OF BOARDS GROWING

Intensive Demand for Drug Clerks, but None for Proprietors—Committee Recommends Maintenance of Standards for Registration of Pharmacists, but Requirements for Assistants Should be Made in all States

Delegates representing the boards of twenty-three states were present when President W. P. Porterfield, of Fargo, N. D., opened the recent annual meeting of the National Association of Boards of Pharmacy held in Chicago. In his annual address President Porterfield stated that about 400 reciprocal licenses had been granted in the various active member states that make up the membership of the association, a small number as compared with the total number of registrants in the United States, but it compares favorably with that of previous years when the fee required for the official application blank for reciprocal certificate was much less than during the past year. Reciprocity had served to stabilize a very erratic supply and demand condition. During the year four new states were admitted to active membership in the association, which now numbers 43. This leaves only six states outside the association—New York, Rhode Island, New Jersey, California, Washington, and Wyoming. However, applications for membership are pending from New Jersey and Washington.

E. C. CHRISTENSEN,
Sec., N. A. B. P.

JOHN CULLEY,
Pres., N. A. B. P.

President Porterfield devoted considerable attention to the influence of the war on the supply of registered pharmacists, but declared that he was emphatically against lowering the standard or requirement for registered pharmacists in any way. He urged the adoption of a number of resolutions, among them being one that the association should take steps to establish a minimum standard for the courses upon which graduation from a college of pharmacy as a pre-requisite for examination as a licensed pharmacist is based, and what should constitute the minimum requirement for each year of high school work. He recommended that efforts be made in all states, where statutes were not already provided, to establish two classes of pharmacists—registered pharmacists and assistants, and that separate sets of questions be prepared for each of these classes, instead of basing the classification on higher and lower per cent grades made on the same set of questions. Privileges for reciprocal registration of assistants should be granted by the boards on similar terms to those obtaining for registered pharmacists. The resolution of the association adopted in 1915 to require high school graduation (four years) for entrance to examinations for registered pharmacist in 1920, Mr. Porterfield said, should be amended to become effective on Jan. 1, 1923, as conditions in a number of the States would not permit boards to adopt such a requirement at the present time.

Secretary Christensen reported that 561 application blanks for reciprocal registration had been disposed of since Sept. 1, 1917, and that 409 reciprocal registrations had been reported to the secretary's office. No complaints had come to hand relating to the increase of the fee for the application blank from $5 to $15. The secretary's report showed receipts of $9,602.

At the second session Secretary Christensen, as chairman of the Advisory Examinations Committee, presented a report in which he said that a noticeable improvement in the character of questions employed by boards was noted, and that if there was any criticism to be made, it would be that a number of the boards do not give recognition in their questions of the Ninth revision of the Pharmacopoeia. He thought it should be the duty of the board to satisfy itself that all applicants are fully conversant with the new editions of both Pharmacopoeia and National Formulary. Advanced standards for the registration of pharmacists should be maintained, but provision in all states should be made for the registration of assistants. There was no demand for more proprietors, but for more clerks, every day clerks, and provision should be made for the registration of such with qualifications sufficiently high to make safe assistants to the registered proprietor. Young men and women should be encouraged to enter the practice of pharmacy as apprentices, and in a short time they could qualify to handle the commercial routine of the drug store. If no provision is made for assistants in a state, unregistered help might be permitted to be alone in stores during certain specified hours and sales confined to certain limited articles. Such a plan, Mr. Christensen stated, is working out very satisfactorily in Illinois.

The following officers were elected; President, John Culley, Ogden, Utah; 1st vice-president, H. G. Ruenzel, Milwaukee, Wis.; 2nd vice-president, E. V. Sheely, Memphis, Tenn.; 3rd vice-president, Edward Dorsey, Ottawa, Kansas; secretary, H. C. Christensen, Chicago, Ill.; treasurer, C. H. Skinner, Windsor, Vt.; executive committee, H. E. Purdy, Derby, Conn., W. R. Jarrett, Oklahoma City, Okla., and Charles Geitner, St. Louis, Mo.; advisory examinations committee, H. C. Christensen, Chicago, Burton Cassady, West Terre Haute, Ind., and Charles Falkenhainer, Dubuque, Ia.; member of the syllabus committee, George W. McDuff, New Orleans, La.

REORGANIZATION IN COLLEGE STAFF

The faculty of the Queen City College of Pharmacy, Cincinnati, Ohio has been reorganized by the election of J. Edwin Jay, president of Wilmington College, as president, while Dr. Frank Cain has been made vice-president. Other elections include that of Prof. Russell Olt as actuary principal, Prof. Edw. A. Ohm as recording secretary, and Prof. Frank R. Elliot as dean. Dr. Cain, who retires as dean and becomes vice-president, will continue to devote most of his attention to the organization of a pharmaceutical corps for the Army. Dean Elliott announces that he intends to make special efforts to secure the matriculation of high-school graduates in the school, in order to supply the existing shortage of graduate pharmacists.

CONFERENCE OF FACULTIES MEETS

President Kraemer Recommends Two Classes of Drug Dealers and Two Classes of Colleges for Instruction in Commercial Pharmacy and Professional Pharmacy Respectively—Officers Elected

The principal feature of the 19th annual meeting of the American Conference of Pharmaceutical Faculties held in Chicago on August 12 and 13, was the address of Dr. Henry Kraemer, of the University of Michigan, president of the Conference. After a passing reference to the present war and the deaths of Prof. J. P. Remington, Dr. A. B. Huested and Prof. John Harper Long, which occurred since the date of the last annual meeting, Dr. Kraemer related his experience in attending the convention of the American Drug Manufacturers' Association held in New York last February and told of some of the questions the members discussed, especially those relating to the establishment of standards and the comparative study of analytical methods. He said the meetings were most informative and that if one wished to obtain a grasp of the magnitude of the work in pharmacy and the responsibility that rests upon teachers of pharmacy to produce the men competent to engage in the solution of these larger problems, he should attend such meetings.

This experience prompted him to do what he could to influence students to prolong their studies at the University much beyond the four years' bachelor's course. Leading manufacturers of drugs and medicinal products in this country were searching for men and women capable of conducting researches and taking initiative. For this work, post-graduate courses co-ordinated with the other scientific and professional courses of the universities are needed, and it would be useless at this time to think of any research effort as being worth while unless the student has had a thorough university training or is pursuing a course of study leading to the degree of doctor of philosophy or doctor of science. Many teachers, he said, have no comprehension of what research means, and have no temperament for the work. He said he could not emphasise too strongly the need for cultivating the highest educational requirements and placing on faculties men of research who will be examples for their students.

The time has come for colleges to change their methods of procedure in accordance with economic laws. The colleges must either train men for an occupation or a profession. If it is to fit them for an occupation, the curriculum should be largely commercial, and if it is intended to fit them for a profession, the prescribed course must be of a professional character. Schools that are turning out retail druggists of the present type should work on a syllabus that is best suited for the education of the commercial type of men. This, Dr. Kraemer argued, would mean not only two kinds of drug stores, the professional and the commercial store, but it would also mean two types of colleges, one with a curriculum suited to the needs of the druggist who conducts the store in which the greater part of the business is outside of drugs, and the other with a curriculum for the real pharmacist who would also be qualified to engage in professional work. Commercial pharmacy of today has a distinct place in real life and every community would suffer if the average drug store was not run pretty much as it is. But he would make a class of apothecaries who would devote their entire attention to drugs, medicines and sick-room supplies and further qualify them to assist the physician in making pathological analyses. This type of apothecary would be allied also to the board of health work.

In closing his address, Dr. Kraemer recommended that the Association of Boards of Pharmacy give earnest consideration to a plan for the creation of two classes of drug dealers: Pharmacists or apothecaries, restricting these terms to those who do a minimum compounding of prescriptions, the number to be determined upon careful investigation by the State Board; and druggists, primarily dealers in merchandise or articles outside of drugs and who may under certain conditions sell medicines or even compound prescriptions. The Conference should also take measures to provide for the organization and conduct of two classes of colleges, viz., colleges of druggists, the curriculum being primarily that of a business college to educate drug clerks and those who are to follow commercial pharmacy, and colleges of pharmacy, which should have the standards of any other professional school.

Theo. J. Bradley,
Sec., A. C. Ph. F.

C. B. Jordan,
Pres., A. C. Ph. F.

Syllabi should also be mapped out for these two classes of schools. A committee should be appointed to consider the advisability of the technical high schools giving instruction which would prepare students to become drug salesmen or drug clerks, or even to qualify them to take ordinary positions in manufacturing laboratories. Valuable recruits for pharmacy could undoubtedly be obtained in this way. A committee should also be created to acquaint boys and girls in high schools with the opportunities of following pharmacy as a calling, and another committee on pharmaceutical degrees should be appointed to acquaint the Conference with the work of the Committee of Academic and Professional Higher Degrees of the Association of American Universities. The degrees given for pharmaceutical study should conform to the best practice and follow a standard authority on this subject.

The address was referred to a committee consisting of Professors Arny, LaWall, Jordan and Kagy.

The report by Prof. C. B. Jordan of the Committee on Faculties urged that faculties should give more attention to research work, a subject that was further discussed by Dr. Edward Kremers as chairman of the Committee on Research. There was no reason why research work of this character should be undertaken by professors in schools of medicine or professors of chemistry in universities. Pharmaceutical faculties should bestir themselves.

The following officers were elected. President, Prof. C. B. Jordan, Purdue University, School of Pharmacy, Lafayette, Ind.; vice-president, Dr. William Mansfield, dean of the Albany College of Pharmacy, Albany, N. Y.; secretary and treasurer, Prof. T. J. Bradley, dean of the Massachusetts College of Pharmacy, Boston; chairman of the executive committee, Prof. J. A. Koch, dean, Pittsburgh College of Pharmacy, Pittsburgh, Pa.; chairman of the committee on syllabus, Prof. E. A. Ruddiman, Vanderbilt University, Nashville, Tenn.

Saurol is a sulphur-containing oil distilled from a shale found in Switzerland. It is advanced as a substitute for ichthyol.

Professional & Trade Associations

OREGON

The Oregon Pharmaceutical Association at its annual meeting held at the Multnomah Hotel, Portland, on July 11, approved the proposal of the National Council of Defense that deliveries be limited to one per day except in case of necessity occasioned by illness, adopted a resolution to remit the dues on members of the association serving in the Army and Navy, endorsed the Edmonds bill for the establishment of a pharmaceutical corps in the Army, and also adopted a resolution approving the federation of pharmaceutical associations throughout the country in a common organization. The shortage of drug clerks was discussed and it was suggested that women might well take up pharmaceutical courses and prepare themselves for this work.

The following resolution was adopted:

In the interests of conservation of man power as well as fuel and light, it is advisable for druggists to close earlier in the evening, as well as at least part of every Sunday. The president of this association is hereby directed to call upon all Oregon druggists to adopt closing hours not later than 9 p.m. on week night and 10 p.m. on Saturdays, with one-fifth of their usual hours on Sundays during the months between October and April, inclusive.

The annual election resulted: H. F. Brandon, Portland, president; J. C. Perry, Salem, first vice-president; E. A. Robinson, Portland, second vice-president; N. F. Reed, Bend, third vice-president; A. W. Allen, Portland, secretary; B. F. Jones, Portland, treasurer.

Addresses were made by Mayor Baker, W. F. Woodward, W. K. Newell, of the Food Administration, and A. G. Clarke, of the Home Industry League. Lester Leland, John M. A. Laue, J. W. Donnelly and M. A. Lyons were appointed a committee to co-operate with the war service committee of the National Association of Retail Druggists.

WASHINGTON

The Washington State Pharmaceutical Association held its annual meeting this year on board the steamer President, where the delegates assembled for a three days' tour of Puget Sound. The association adopted two resolutions, one pledging the members to discourage in every way possible the use of German made goods by either doctors or the public, and the other endorsing the Stephens price maintenance bill which is now being drafted to prevent price cutting by retailers. The association also voted to support the Edmonds bill for the establishment of a pharmaceutical corps in the Army. In supporting the bill the association recommended that petitions for signatures of voters in favor of the bill be placed in all drug stores throughout the State.

The following officers were elected: President, A. D. Sloan, Yakima; vice-president, C. Osseward, Seattle; secretary, G. Elmer Brown, Spokane.

TENNESSEE

The Tennessee Pharmaceutical Association held its annual meeting at Jackson on July 9 to 11, and elected the following officers for the ensuing year; President, H. E. Mason, Smithville; 1st vice-president, H. M. Oliver, Union City; 2nd vice-president, J. C. Freels, Morristown; 3rd vice-president, T. J. Shannon, Sharon; treasurer, T. Scruggs, Jackson.

Recommended to the Governor for appointment to membership on the State Board of Pharmacy; to succeed M. E. Hutton, whose term of office expires; M. E. Hutton, J. B. Sands, D. J. Kuhn, C. E. Perkins and R. L. Thompson.

HELP THE EDMONDS BILL

Every Congressman this Fall should hear in no uncertain terms, from his constituents that they wish the passage of the Edmonds Bill, for the protection of the men in the Army and as a help to the Medical Department of the Army.

Throughout the entire United States and the world, physicians in private practice have been, and are, depending on the services of trained pharmacists in their ministrations to the sick, and in every European country, where army organization on a large scale has been the study of years, this same co-operation between the physician and pharmacist has been made a feature of the Medical Corps. The men in our army need this complete organization for the best medical treatment, army physicians need the help of pharmacists in the buying, preparing, standardizing, and dispensing of the potent remedies used in the treatment of the sick and wounded, the United States Government has had need, and has been using, trained pharmacists since the beginning of the war, in the buying, standardizing, and manufacturing of these same remedies, and the United States Navy has for many years recognized the necessity for the service of a trained officer, who embraces those qualifications contemplated for the Army by the Edmonds Bill.

In the expansion of the army to five million men or more, graduate physicians cannot be supplied to fill many non-medical offices. Why are not those pharmacists, who can demonstrate this special ability by actual test, given the opportunity to help the Medical Corps? It is justice to the soldier in the army, and means greater efficiency, economy, and better treatment for the sick and wounded. Those who know these conditions, naturally want to know why a pharmaceutical division has not been organized before, and they are demanding the establishment of this important branch of the medical service. Congress has been hearing from many constituents, and these Congressmen are asking Representative Edmonds why the bill has not yet been reported out of Committee. Thousands of letters have been written, but why should not 100,000 letters go in to Congress during the Fall months? Can we count upon you as one of the 100,000?

At least, secure a blank for a petition by writing to the Secretary of the N. P. S. A. at 145 N. Tenth Street, Philadelphia, Pa., and conduct a personal campaign of education in your community, getting the signatures of parents of men in the army, who have a right to demand the very best protection for their boys; also the names of physician friends, who know the value of pharmaceutical help, and recognize its need in the army, and then don't forget those who control political influence in your community! They can be of untold value, as signers of the petition, and especially in bringing personal pressure upon your Congressmen. If possible, secure the help of such a man in getting the petition before your Representatives, and if you mail it, see that it is accompanied by a personal letter in which the question is specifically asked "What is being done about the Edmonds Bill, and why has it not been passed?"

Any literature that you need in such a campaign will be gladly supplied by the Secretary's office. Blanks for petitions, copies of the Edmonds Bill, arguments before the Military Affairs Committee of Congress, and other helpful material are at your disposal on request.

DRUG TRADE ROLL of HONOR

To honor the men of Pharmacy serving in the war against Antocracy the ERA wants to publish a complete roster. Send full particulars to 3 Park Place, New York.

That pharmacy will be accredited with distinguished representation in the country's service, whether Congress sees fit to authorize a pharmaceutical corps or not, never has been doubted by anyone acquainted with the kind of metal of which the men in the profession are made. Voluntary enlistments are numerous, and many of the boys have secured commissions and are making good as officers. News from "over there" frequently contains honorable mention of some one who, a few months ago was peacefully rolling pills and doing his part in ministration to the ill, and who now is valiantly giving all he has to the cause of democracy.

B. B. Freeland

One of the most prominent men in the trade, although he is still in his twenties recently turned over a splendid business to others and joined Uncle Sam's air forces. B. B. Freeland, the youthful business genius of Florida, who, although only twenty-eight years of age has built up a chain of six high-grade drug stores is now in the aviation service, waiting his turn at the Hun. Freeland, who is the active member of the Gruber-Freeland Co., of West Palm Beach and Miami, Florida, is big in every sense of the word. He is six feet two in height, weighs two hundred pounds, and is gifted with that forceful personality which makes the ideal soldier. His nerve in giving up a $350,000 business at the very height of his success furnishes some idea of what he will do to Fritz's airmen when he catches them.

Both members of the firm of Wahl and Terrance, Sac City, Iowa, are now with the colors, having sold their store for the purpose of enlisting.

Edward J. Freyer, a pharmaceutical chemist of London, England, who has been living in Boston, Mass., recently joined the British army in the latter city for service in the British Medical Corps. He is a member of the Pharmaceutical Society of England.

T. P. Taylor, Jr. of T. P. Taylor & Co., druggists of Louisville, Ky., has been commissioned a Lieutenant in the aviation service, and is located at Camp Taliaferro, Fort Worth, Tex.

Ensign Junius Andrews, a naval aviator, who was killed by a fall with a seaplane on the beach at Chatham, Mass., July 13, was a chemist in the laboratories of the Emerson Drug Company, Baltimore, before he entered the aviation service. He was a nephew of Capt. Isaac E. Emerson, head of the company, and had graduated from the University of North Carolina and taken a course in chemistry at Columbia University. He came to Baltimore in May, 1916, and was to have married Miss Lillian Day in September next.

DOMINICK BORRELLI, pharmacist, Chicago, Ill., Medical Corps, Jefferson Barracks, Mo.

HERBERT G. SCHMIDT, in pharmacy with his brother, Edward E. Schmidt. 3822 North Ave., Milwaukee; enlisted as a private U. S. A. Infantry, June 6, 1917; killed in action on German soil May 29, 1918.

CARROLL B. SUMINSBY, prescription clerk, with H. H. Hay Sons, Portland, Me.; National Army, Camp Devens, Mass.

ROBERT H. DARE, son of H. H. Dare, pharmacist, Lagro, Ind.; Medical Department, 151st Infantry, Camp Shelby, Hattiesburg, Miss.

WALTER BUNGER, head soda dispenser, 2140 8th avenue, New York City; U. S. Army.

R. W. JOHNSON, druggist, Three Rivers, Mich.; enlisted for special training M. A. C.

H. E. BERSONS, Central Pharmacy, Macon, Ga.; pharmacist, Base Hospital, Camp Wheeler, Ga.

EARL E. PUGH, with Brooks Pharmacy Co., Tifton, Ga.; Medical Corps, U. S. A., Mobile, Ala.

TIMOTHY RYAN, druggist, Kearney, Neb.; Medical Corps, Army, Camp Funston, Fort Riley, Kansas.

FRANK J. ZAROBSKY, Park Front Pharmacy, 420 N. Parkside ave., Chicago, Ill.; Marine Corps, Paris Island, S. C.

FRANK C. BALDWIN, manager of the Owl Drug store, Spokane, Wash.; special enrolling officer, recruiting service for sea training, U. S. Mercantile Shipping Board.

E. E. FABIANO, Kansas City, Mo.; 1st lieutenant, Signal Corps, Manila, P. I.

HAROLD B. HEDRICK, Kansas City, Mo.; Stoke on the Trent, War Hospital, Staffordshire, England.

A. C. HANKINS, with Hankins Drug Co., Inc., Daytonia, Fla.; sergeant 1st class, 78th Division, A. E. F., F. A., M. D., France.

CHAS E. FREEMAN, with Hankins Drug Co., Inc., Daytonia, Fla.; sergeant Hdqtr. M. O. T. C., Chickamauga Park, Ga.

ANDREW IRWIN, with Hankins Drug Co., Inc., Daytonia, Fla.; Co. M, 124th Fla. Inf., Macon, Ga.

J. L. NASON, druggist, San Francisco, Cal.; Medical Reserve Corps, Fort Riley, Kansas.

LOUIS COHEN, with Sisson Drug Co., Hartford, Conn.; Navy, New London, Conn.

DR. JAMES M. O'MALEY, druggist and health officer, Covington, Ky.: captain, Reserve Medical Corps.

JOSEPH WITTENBERG, with O. A. Hoffmann & Bro., pharmacy, Cincinnati, O.; Great Lakes Naval Training Station, Chicago, Ill.

CHARLES H. SOHN, formerly proprietor of the Court Drug Store, Towson, Md.; lieutenant, U. S. Army.

RALPH WINDMUELLER, son of John Windmueller, druggist, Chicago, Ill.; hospital steward, 3rd Reg. Co. 1, Camp Dewey, Great Lakes Naval Training Station.

S. N. EDISON, druggist, 184 North Cicero ave., Chicago, Ill.; U. S. School of Military Aeronautics, Champaign, Ill.

EDWARD PORGES, son of Leo Porges, druggist, Chicago, Ill.; ensign U. S. Navy.

FRANK J. ZAROBSKY, druggist, Chicago, Ill.; private Co. 158, U. S. Marine Corps, Paris Island, S. C.

LELAND HENDRICKS, clerk with Bierley's Pharmacy, Portland, Ore.; 1st class Hospital apprentice, Naval Reserve.

PERCY K. PUTMAN, with Merwin Drug Co., Minneapolis, Minn.; Medical Department, Great Lakes Naval Training Station.

M. F. OLSON, pricer, Northern Drug Co., Duluth, Minn.; Army, Camp Grant, Rockford, Ill.

L. H. GRIMM, druggist, Lamherton, Minn.; Camp Greenleaf, Fort Oglethorpe, Ga.

JOHN QUIXTNER, with C. A. Hougen, Durand, Wis.; Hospital Corps, U. S. Naval Reserve, Great Lakes Training Station.

L. G. DARLING, pharmacist, Kenmare, N. D.; Medical Corps, U. S. Army, St. Louis, Mo.

E. C. VINCENT, with F. W. Mixter's pharmacy, Exeter, Cal.; Ambulance Corps, Camp Kearny, Cal.

J. G. RINKER, Warsaw Pharmacy, Lindsay, Cal.; National Army, Camp Lewis, Wash.

J. C. REGISTER, of Spear & Register, druggists, Waycross, Ga;. Medical Supply Department, U. S. Army, Fort Oglethorpe, Ga.

JOHN REINHARDT, Manchester, N. H.; Non-Commissioned Officers' School, Fort Bliss, Texas.

ALFRED A. CONLIN, druggist, Lawrence, Mass.; Medical Department, U. S. Army, Newport News, Va.

FRANK KWAPPICH, clerk in Rossford Pharmacy, Toledo, O.; pharmacist, U. S. Navy.

Dr. Frederick J. Wulling, dean of the University of Minnesota College of Pharmacy, reports the following list of names of those who left recently or military service; P. E. Blanchette, '18; Claire L. Flanders, ex '18; Rasmus Bartleson, '14; Alfred M. Hirschner, '16; Vernor C. J. Peterson, '17; Abraham Strimling, Ph. G., '17, Ph. C., '18. The number of stars in the college service flag is now about eighty-five.

The following students and graduates of the California College of Pharmacy are in the United States service; J. L Parks, Medical Officers' Reserve, Fort Riley, Kansas; W. H. Martin, C. Hudson, F. Roper, A. M. Deacon and O. L. Garlich are in Camp Fremont; J. H. Walker, Mare Island Hospital; H. Palmateer, Medical Department, U. S. Army, Presidio; Prof. J. N. Patterson and H. R. Gaskins, Camp Kearny; C. Griggs, Camp Dodge, Iowa; O. G. Baily, Naval Training School, San Diego; O. B. Pennington, U. S. Marine Corps; O. J. Ingeniath, Camp Lewis, American Lake, Washington.

The University of Iowa College of Pharmacy sends the Era the following list of graduates and former students who are now in the Army and Navy and whose names are represented by stars on the service flag of the college:

J. L. KUBICEK, '12, California Masonic Hospital Corps.
H. W. PREUSS, '15, Hospital Corps.
E. D. BROWN, ex '14.
R. G. ODLE, '17, Camp Dodge.
R. E. STEWART, '17, sergeant, 350th Field Hospital Corps, Camp Dodge.
E. T. BJORNSTAD, '16, 2nd lieutenant, Camp Funston, Kansas.
W. R. JENNING, '16, sergeant, 168th infantry in France.
J. C. LIEK, '16, Hospital Corps, Fort Benjamin, Harrison, Ind.
R. S. POTTER, ex '16, Camp Dodge, Des Moines, Iowa.
W. E. PALMER, '14, Med. Department, 11th regiment, Dispensary No. 2, U. S. Marine Barracks, Quantico, Va.
C. C. POWERS, '14, Charleston, S. Carolina.
CHAS. CARTER, '17, Camp Lewis, American Lake, Washington.
D. T. STANTON, '17, Ambulance Corps, France.
V. H. TYLER, '16, sergeant, Post Hospital, Ft. Snelling, Minn.
R. E. HUMPHREY, '05, captain, U. S. Regulars, in France.
E. L. BRIGHT, ex '17, Co. A. Engineers, Camp Cody, Deming, N. M.
I. V. COZINE, '97, Hospital Corps, Navy Yard Marine Barracks, Puget Sound.
W. A. DODD, ex '15, Ambulance Corps, in France. Awarded croix de guerre.
B. B. Hunter, 15.
P. K. HUSTON, '15, 1st Iowa Cavalry.
V. M. STEPHENSON, ex '16, N. A. Cantonment.
E. J. MEISTER, '17, Navy, Great Lakes Training Station.
M. F. KYHL, ex '15, Camp Dodge, Des Moines, Iowa.
W. R. BRYANT, '15, Medical Department, 4th Unit, 164th Depot Brigade, Camp Funston, Kansas.
T. H. GILLESPIE, ex '18, Army Dispensary, 209 Rim street, Hoboken, N. J.
RILEY EUGENE BARNES, ex '19, aviation corps (clerical dep't) Mt. Clemens, Mich.
C. W. WILSEY, ex '19, 2nd lieutenant, Camp Dodge, Iowa.
FRED JEAN, ex '19, Navy.
J. P. SWEENEY, ex '18, 3rd officers' training camp, Camp Dodge, Iowa.
H. J. TIERNEY, '17, (in France).
P. J. HANZLIK, '02, Medical Research for National Research Council.
J. M. LINDLEY, '89, member Henry County Council of Defense.
S. M. HADNOTT, '10, Camp Dodge, Des Moines, Iowa.
W. FIELDS, '13, Camp Dodge, Des Moines, Iowa.
T. H. BEEKMAN, '17, Fort Riley, Kansas, in France.
P. J. SCHNEIDER, '10, Fort Leavenworth, Kansas Dept. Laboratory.
ALBERT G. HENNEGER, '16, Camp Dodge, Ambulance Corps.
D. H. ELLISON, '10, Army School of Mechanics, Camp Bradley, Peoria, Ill.
B. F. PETTIS, '12, Co. F., 55th Engineers, Barracks 83, Camp Custer, Mich.
J. A. ROONEY, ex '18, 350th Field Hospital Corps, 313th Sanitary Train, Camp Dodge, Iowa.
A. W. NIXON, '02, sergeant, 1st class, Base Hospital (The Dispensary), Camp Wadsworth, S. C.
DR. J. E. PACKARD, 1st lieutenant, Dent. O. R. C.
C. E. JACOBS, '14, Mechanics Training.
O. A. BYRNE, ex, Fort Riley, Kansas.
R. E. EVERLY, '16.
R. B. WALKER, '17, Med. officers' training camp, Fort Riley, Kansas.
F. P. HESS, '14, Naval Training Station, Pensacola, Fla.
O. E. FERGUSON, '15, Fort Riley, Evacuation Hospital, No. 12, M. O. T. C., France.
HENRY DE DRAAY, ex '14, Army.
H. W. FOSTER, '11, M. O. T. C. Band, Fort Riley, Kansas.
J. M. SEVEREID, '18, Hospital Unit 8, Camp Decatur, Great Lakes, Ill.
RAY B. SMITH, '19, Coast Artillery, Newport News.

PAUL YULE, ex '19, (officers' training camp), U. S. Marine Corps, Port Royal, S. C.

PHILIP SIPFLE, '09, Army.

H. E. BOWERS, '11, 4th Officers' Training Camp.

EMIL BENESH, '00, Iowa War Savings Committee, Group 7.

GROVER CODER, '10, Camp Dodge.

A. C. FREESE, '17, Camp Decatur, Company 250, South Great Lakes, Ill.

N. C. LOUIS, Fort Sheridan, Ill., Co. 7, R. O. T. C.

E. HAZELDINE, Ft. Riley, Kansas.

W. F. MEADS, Ft. Riley, Kansas.

CHARLES W. HALL, druggist, Salem, Mass., at Camp Devens, Mass.

WILLIAM LYNCH, member of firm of Lynch & Hoyl, Fairhaven, Conn., Naval Training Station, Pelham Bay, N. Y.

ERNEST R. GREEN, proprietor Green's drug store, Leominster, Mass. American Expeditionary Forces, now in France.

VERNON LEWIS, of the Vernon drug store, Vernon Center, Minn. U. S. Army.

D. W. SNYDER, of Fearnly & Snyder, North Bend, Ore. U. S. Army.

WALLACE W. GUILLO, only son of F. W. Guillo, druggist, Taunton, Mass. 1st class private, dispensary, Medical Corps, Fort Banks, Winthrop, Mass.

CHARLES A. WEBSTER, with Bower's drug store, Olney, Ill. Base hospital, Fort McIntosh, Laredo, Texas.

JOHN O'HARROW, son of John O'Harrow, druggist, Bloomington, Ind. Lieutenant, artillery unit, U. S. Army.

STEVE GUNDERSON, of the Snohomish Drug Co., Snohomish, Wash. Hospital Unit, No. 50, Palo Alto, Cal.

DONALD EASTHAM, with Plummer Drug Co., Portland, Ore. Private Co. E, 117th Regiment of Engineers, American Expeditionary Forces, France.

THOMAS SPROAT, with Red Cross Pharmacy, Billings, Mont. National Army, Camp Lewis, Wash.

MICHAEL SEEFCHAK, junior clerk with Chas. H. Buck, druggist, 5228 Broadway, New York. Medical Department, 30th Infantry, somewhere in France.

DR. LUCIUS P. BROWN RE-INSTATED

Following his reply to a public attack made on him by the former chairman of the Municipal Service Commission, Dr. Lucius P. Brown, director of the Bureau of Food and Drugs, New York City, was suspended on May 2. An investigation of the Health Department by the Hylan administration followed, and Dr. Brown was tried on charges of neglect of duty, shirking his work and relying too much on his subordinates. These charges received wide publicity owing to the prominence of Dr. Brown in his chosen field and his wide acquaintance among State food and drug officials throughout the country. At the trial, however, Dr. Brown was acquitted and he was unanimously reinstated as director of the bureau of foods and drugs of the New York Health Department.

Dr. Lucius P. Brown

Dr. Brown came to New York from Tennessee, where he had gained prominence for his thorough work as Food and Drug Commissioner of that State, a position he held from 1908 until 1915, when he was appointed to his present position as the result of a civil service examination, in which he passed with a higher rating than any of a number of competitors. In addition to his official experience as State Food and Drug Commissioner, he served as chemist of the Tennessee Agricultural Experiment Station for two years, and was also a director of two large manufacturing corporations. He was born in Maury county, Tenn., in 1867, and received his education at the University of Virginia. He is a member of a number of professional organizations, including the American Chemical Society, American Pharmaceutical Association, the American Association for the Advancement of Science, and the American Dairy, Food and Drugs Official Association, of which he was formerly president.

Women in Pharmacy

CONDUCTED BY EMMA GARY WALLACE

WINNING HER WAY IN PHARMACY

A graduate of the Wheaton High School and the observing daughter of an active druggist and proprietor of the drug store at Hubbard Woods, Ill., it did not require much deliberation for Miss Ethel M. Carlson to adopt the suggestion of her father and accept the opportunity to matriculate in the University of Illinois School of Pharmacy as the prelude to becoming an active pharmacist herself. This she did in 1916, starting with a class of about one hundred members, three of whom were young ladies. The work of the course proved intensely interesting and she rapidly advanced. During her second year at college, the girls of the Lambda Kappa Sigma Sorority of the Massachusetts College of Pharmacy, Boston, asked the women students of the University of Illinois School of Pharmacy to join with them in a National Sorority, having for its object the closer affiliation of the women pharmacists of the United States. This call appealed strongly to Miss Carlson and the other girl students in the Illinois institution, all of whom joined the sorority.

Miss E. M. Carlson

When graduation day came in June last, Miss Ethel's class had dwindled down to about thirty-seven, but the class service flag of forty blue stars and one gold star, told an eloquent story of which the school is very proud. The two highest honors in the class were won by two girl students. Miss Pauline McClure received the first—a gold medal, and Miss Carlson the second—the Herman Fry prize, a valuable compound microscope. She is not yet eligible to take the State Board examiation for full registration, but expects to be able to do so soon. She is now working in her father's store.

AROUND THE CIRCUIT

The Philadelphia College of Pharmacy is offering twenty free scholarships, available to those who can fulfill the conditions. Women who are desirous or able to undertake the study of pharmacy, are urged to consider this opening.

Mrs. Chris Koerner, a former beloved President of Milwaukee Chapter, W. O. N. A. R. D., has recently the proud but sad honor of having given a brother to help save the cause of Freedom on the face of the earth. He lies buried "Somewhere in France." Her brother was a registered pharmacist.

Mrs. Nellie Florence Lee, the capable financial secretary of the W. O., who has been suffering from a very serious attack of ptomaine poisoning, which menaced her life, is now recovering. She was taken to the Pennsylvania Hospital of which her son, Dr. Walter E. Lee, is one of the physicians. She hopes to be in attendance at the W. O. N. A. R. D. convention at New Orleans in September.

Mrs. John Weik of Edwards Road, Oakley, Cincinnati, recently entertained the ladies of the Cincinnati Chapter. Among the guests were Mrs. Albert Groenland and baby of Brookline, N. Y., the daughter-in-law and granddaughter of Mrs. Otto Groenland, who was treasurer of the W. O. for so long. The beautiful musical selections rendered by Miss Funke during the afternoon were especially enjoyed.

The June meeting of Cincinnati Chapter No. 5, was held at the home of Mrs. Louise Blesi, at Fairview Heights. The new Chapter president, Mrs. Henry Wagner, presided, and new chairmen and committees were named for the ensuing year. Great sympathy was expressed for Mr. and Mrs. William Brittain, on account of the death of their son, Thomas, by accidental drowning. He was one of Prof. Gibbs' most talented pupils at the Cincinnati Conservatory of Music.

Mrs. Ludwig, first vice-president of St. Louis Chapter No. 8, presided at the last meeting held at the Planters Hotel, Mrs. Pauley, the president, being unable to be present, owing to serious illness. A committee of ladies was appointed to sell Thrift Stamps and War Saving Certificates. These ladies were Mrs. Pieper, Mrs. Hausgen, Mrs. Ittner, Mrs. Schwerdtman, and Mrs. Thebus. An afternoon of music and a literary program was enjoyed.

Mrs. Robert L. Braswell of Springhill, Mobile, entertained the members of Chapter No. 9, at her delightful home, for the last meeting of the season. The ladies present were Mrs. Bauer, Mrs. Cox, Mrs. Colvin, Mrs. Rutherford, Mrs. Macon, Mrs. Ebleske, Mrs. McMillian, Mrs. Powell, Mrs. Nelson, Mrs. Newton, Mrs. McCarty, and Mrs. Roe. The afternoon was spent making knitted blocks for a "comfort" for the soldiers.

Mrs. J. M. Newton was elected delegate from the Chapter to the New Orleans Convention. The following officers were named to serve for the ensuing year: President, Mrs. J. D. Sutton; vice-president, Mrs. Jesse Nelson; secretary, Mrs. S. H. Colvin; treasurer, Mrs. C. F. Powell.

Mrs. John Jennish acted as hostess at her hospitable home, Moline, for the ladies of Rock Island Chapter No. 15, at their last meeting. There was a business session and a period of Red Cross work, followed by games of "500." The next meeting will be held with Mrs. Charles Bronstrom, River Drive, Moline.

Mrs. Anna Lambeck, president of Milwaukee Chapter No. 9, reports great activity in patriotic work among their members. Every member does something. Sometimes the ladies meet in the public parks or have a little picnic so they can take their children and let them have an outing and play a spell, while they, the mothers, knit and sew.

Mrs. Clark, corresponding secretary of Indianapolis Chapter No. 20, reports 128 garments finished and handed over to the Red Cross. The ladies are to meet in future in the new Department Club House on Meridian Street. The Chapter has also recently joined the Indiana Federation of Women's Clubs.

Mr. and Mrs. Ferger entertained the W. O. members and their husbands at their country home in July. Ninety guests motored from Indianapolis. Mrs. Ferger, who is president of the Indianapolis Dancing Club, had prepared the splendid new barn for a Barn Dance, decorating it gaily with the flags of the allied nations and the Indiana State flag.

A KANSAS WOMAN PHARMACIST

Among the successful women pharmacists in the Sunflower State is Mrs. Bertha Rust Cox, proprietor of the thriving Cox Pharmacy, located at Cawker City, Kansas. Mrs. Cox is the pharmacist and is assisted in the general business by Mr. Cox. She early became interested in pharmacy and determined to master the subject so as to be able to conduct a store of her own. She has worked in one drug store since 1909, with the exception of the time she was studying in the Kansas City College of Pharmacy, and a short period spent in the drug business in Iowa.

Bertha M. Cox

After her marriage in 1915 to Mr. Cox, and a short experience at farming, they began to look for a suitable drug store location, so that Mrs. Cox could follow the calling for which she had fitted herself. This was found at Cawker City, in the heart of the Solomon Valley, two miles distant from the famous Waconda Springs, a well-known health resort. The surrounding country is filled with well-to-do people, and the Cox Pharmacy is already doing a fine business. Mrs. Cox speaks in high terms of the training afforded by her alma mater and her appreciation of the work of Mrs. Whitney, who is a member of the faculty of the Kansas City College of Pharmacy, and the present president of the Missouri Pharmaceutical Association.

Sofos is a mixture of sodium dihydrogen phosphate and sodium bicarbonate, rendered stable by coating the particles of one of the constituents with disodium hydrogen phosphate. When treated with water, sofos forms nascent sodium phosphate, and liberates CO$_2$, with effervescence. Dose, 60 to 240 grains.

PLAYING GERMANY'S OWN GAME

Because Germany has controlled chemical literature and organized all scientific education upon an industrial basis, she has been able to foist upon the world an undeserved reputation for chemical supremacy. How few druggists even appreciate that German chemists have discovered only one of the important elements—aluminum—and not a single one of the basic laws of the science! Germans did not discover the first or the most important coal-tar dyes, the fixation of nitrogen, the commercial processes of making sulphuric acid or caustic soda, or even the explosives used in modern warfare. How Germans have exploited the American drug trade in salol, phenacetin, and other coal-tar medicinals is known to all druggists, and one good way to protect drug trade interests is to educate physicians and the public to a better knowledge of the false chemical reputation Germans enjoy. Prof. Leigh's stinging indictment is now available in booklet form as a complete whole, and to distribute these is patriotic work and a real help to American druggists. The price has been made as low as possible, and one of these booklets enclosed in your September bills and slipped into every package would be practical American propaganda of great value.

MERCK'S MILK SUGAR AND BARLEY FLOUR

Milk Sugar Merck is now supplied in special sealed canisters (nursery packing) in both one-pound and half-pound sizes. Merck & Co. are also offering their own brand of carefully selected and tested barley flour. It is now placed on the market in special one-pound sealed canisters (nursery packing), which gives to the flour the maximum protection that all high-class cereal products should have.

DR. FISCHELIS IN WAR SERVICE

Dr. Robert P. Fischelis, of the scientific staff of the H. K. Mulford Company and secretary of The Pennsylvania Pharmaceutical Association, has accepted an appointment in the newly-formed Chemical Warfare Service of the United States Army. He will be stationed at the Control Laboratory of the Gas Defense plant at Long Island City for the present.

Dr. Fischelis will continue to conduct the work of The Pennsylvania Association from his office at 828 North Fifth St., Philadelphia.

DRUG TRADE ROLL OF HONOR

The Pharmaceutical Era is compiling a list of all men and women connected with any branch of the drug trade who are serving in the U. S. Army or Navy and will greatly appreciate information regarding all such persons.

1—Name and Home Address?

2—What were his connections with drug trade?

3—In what branch of the Service, what Grade or Rank and where located?

INFORMATION SUPPLIED BY____________________

MAIL TO THE PHARMACEUTICAL ERA, 3 Park Place, New York

ALSO PLEASE SEND

us any news you can of the Drug Boys now in the service.

Send us their letters, clippings, photographs, etc., for publication, also reports on casualties and promotions.

THE EDITOR

ESTABLISHED 1887

THE PHARMACEUTICAL ERA

AN ILLUSTRATED MONTHLY PUBLICATION FOR THE DRUG TRADE

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A BINDER
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Subscribe to the Fourth Liberty Loan

A considerable number of pages in this issue of the Era is devoted to advertising the Fourth Liberty Loan, an effort at publicity which was made possible only by the patriotic cooperation of various manufacturers of high standing in the drug trade and devoted to the principles which our great country upholds. This action of theirs should serve to emphasize the part that each pharmacist must take in the battle between Kaiserism and democracy; no one can shirk his responsibility in this great crisis. The Fourth Liberty Loan drive, which began on Sept. 28 and is now on, offers a great opportunity for concerted action and individual action, and the loan will be a tremendous success if each American will do his or her individual part as each American soldier in France is doing his part. Our soldiers deserve such support from the people at home, and from every one connected with the drug trade, for the money thus raised goes to make our country safe and victorious in its war for freedom and right. If you can't fight, your money can.

Registering Pharmacist Not Citizens

One of the most interesting resolutions adopted at the recent meeting of the N. A. R. D., is that declaring that boards of pharmacy should not be permitted to grant registration as pharmacists to persons who are not citizens of the United States, or at least shall not be permitted to grant registration to those who have not taken out first papers declaring their intention of becoming citizens. The fact that such individuals are not amenable to draft regulations, and that they may continue in business to the detriment of citizens who are being constantly called to the colors, practically permits boards under various State laws to accord special privileges to persons not citizens when such privileges are denied to our own citizens. Just how far such a rule would run counter to the rights of citizens of countries with which we have treaty arrangements, we are unable to state, but there can be no question that registration should be withheld from subjects of alien nations and from citizens of all countries which do not grant similar privileges to American citizens. The text of the resolution adopted by the N. A. R. D., appears elsewhere in this issue of the ERA.

NEW DIRECTOR FOR ERA COURSE

Professor Stocking, Well-known Educator, Accepts Appointment—Peculiarly Fitted for Conducting Home Study in Pharmacy

Professor C. H. Stocking

PROFESSOR CHARLES H. STOCKING, who accepted the appointment of Director of the Era Course in Pharmacy and assumed the duties of that position on October 1, brings to his new field of labor educational qualifications of a high order, and a practical knowledge of pharmacy and teaching experience that particularly well fit him for instructional work.

Professor Stocking was born near Ann Arbor, Mich. Graduating from high school in 1903, he entered Albion College where he remained a year pursuing studies of a literary nature. He then accepted a position in E. E. Calkins' drug store in Ann Arbor, where his experience led him to decide to follow pharmacy as a profession. He enrolled in the College of Pharmacy, University of Michigan, and graduated in 1907 with the degree of Ph. C. He then took the examination of the Michigan Board of Pharmacy and was registered as a pharmacist. Remaining with Mr. Calkins as head prescription clerk until September, 1908, he re-entered the University of Michigan for advanced work, graduating in June, 1909, with the degree of Bachelor of Science in Pharmacy.

Following his graduation he immediately entered upon the work of teaching in the Kansas City College of Pharmacy, his subjects being pharmacy, materia medica and related sciences. He then became dean of the School of Pharmacy of the University of Oklahoma, a position which he held for five years and during which time the attendance was practically doubled, and the curriculum reconstructed to compare with the best as found in other University schools of pharmacy. During the past year and a half he was with Eli Lilly & Co., of Indianapolis, engaged in sales and detail work alternating with experimental research work in the pharmaceutical laboratory of that concern.

Professor Stocking fully realizes the magnitude of the problems confronting the retail pharmacist in his effort to obtain a sufficient number of trained clerks, and that present conditions afford him an excellent opportunity of assisting those clerks who cannot attend a college of pharmacy. He believes that it is essential to the health of the people that the doors of drug stores be kept open, and in numberless instances this would not be possible without the co-operation of the clerks who have yet to become registered. To these, the Era Course offers an excellent opportunity under his direction for correct home study along well planned and carefully thought out lines.

The Era Course has been most helpful to many young men and women since it was first created in 1895. During this period more than ten thousand students have matriculated and its graduates have been uniformly successful in passing Board of Pharmacy examinations. The Course will now be enlarged, and extended to meet present day requirements, including an Elementary Course for the boys in drug stores, and under the personal supervision of Professor Stocking its field for usefulness will be very much broadened.

The Control of the Bayer Company

At the special request of the Custodian of Enemy Property, we are publishing his advertisement of the Bayer Company. The active control of the Bayer Company—over the plant, offices, and organization and in the more important matter of policy—is now completely in the hands of men appointed by Mr. Palmer, and the sale of the enemy-owned stock of the corporation will be by public auction, but only to Americans whose intention to continue in active management is assured. Mr. Palmer and his aides are endeavoring to preserve the assets and good will of the Bayer Company in order that its American purchasers may acquire a property whose value has not been too greatly lowered by the past German connections of the corporation.

Mr. Palmer has expressed himself publicly in the most vigorous terms as being determined to sever completely the bonds connecting chemical and pharmaceutical houses in America with financial and political interests in Germany. The trade, far better than the public, appreciates what this means, and will rejoice that steps are being taken entirely to divorce these industrial interests from German control.

What the Chemist Is Doing

Marked advance in the manufacture of industrial and pharmaceutical chemicals as well as in dyestuffs will be shown at the Chemical Exposition which opened last week. The use of heavy chemicals in making munitions and the extreme shortage in the variety of colors have attracted more attention than the progress in the pharmaceutical field, but even members of the trade will find the exhibits of medicinal chemicals a surprise and delight because of the remarkable development in that line. It was not fully realized how many popular remedies were imported before the war. Now they are manufactured here and the credit is due the pharmaceutical manufacturers who saw the probable stringency and made preparations to meet it.

Our soldiers in France are gloriously doing their part toward victory; the Liberty Loan subscription must show them that the people at home are doing theirs.

Evolution of Pharmacy in Russia

Obstinate Unwillingness to Grant New and Urgent Reforms Responsible for Present Decadent Trend

By **OUR LONDON CORRESPONDENT**

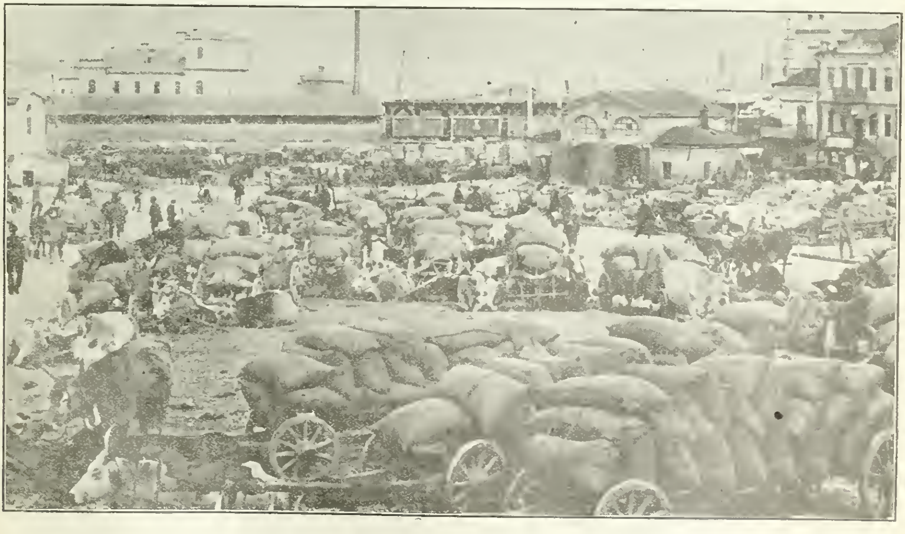
(Concluded from Page 239, September Era)

On August 14, 1741, a ukase was issued in St. Petersburg instructing governments and provinces to hold free pharmacies under the inspection of the Medical Chancellery. But free pharmacies were opened very slowly, the first thus designated not being opened until 1760. At the beginning of the 18th century pharmacists had their guild confirmed by the Imperial authorities, but by the ukase of the Empress Anna Joanovny the guild was closed down on December 5, 1736.

The first free pharmacy in St. Petersburg was opened in Meschtchanky Street, beyond the Blue Bridge, by Martin Berndt on January 29, 1760. In Kaluga the first pharmacy was opened in 1778; Perm, in 1786, and in Nizni-Novgorod, in 1780. At the end of the 17th century the Pharmaceutical Palace again obtained its first name with the additional title of Royal. In 1707 the aptekarsky prikas was called the Pharmaceutical Chancellery, a branch of which in 1712 was transferred to St. Petersburg under the control of the Posolsky prikas. It was placed in the chief pharmacy of St. Petersburg; in 1714, it obtained the name of Chancellery of the Chief Pharmacy, and the Imperial Court Chancellery of the Whole Medical Faculty in the Empire.

The last pharmaceutical nobleman chief of the Pharmaceutical Chancellery, Knyaz Ya. N. Odoievsky, gave up this post on February 17, 1714. At the head of the Aptekarsky Chancellery stood president P. K. Areskin, who received the name of Archeatera (Archiatre Imperial et Medicus Imperatoris.) With the year just named the period of tutelage by the doctors over the pharmacists begins. In the year 1725 the Senate turned the Pharmaceutical Chancellery into the Medical Chancellery, which later in Moscow was renamed the Medical Office. According to the statutes of the office at that time the pay of the court pharmacist was 400 rubles ($200) and of the chief pharmacist (Liebhold) 600 roubles ($300).

From 1721 these two establishments were dependent on the Court Treasury, military and free pharmacies, while in the provinces the pharmacists were subject to the Medical Control. In 1763 the Chancellery was renamed the Medical College, at the head of which stood the Baron A. E. Cherkasoff, who was not a doctor.



Odessa, the greatest of the Black Sea ports, invested by the Teutonic army in the present European war, was founded in 1794 by Catherine II. Long known as the "back door of Russia," it is through this port that the great volume of wheat from Southern Russia finds its way to the world markets. At the beginning of the present century it contained the largest pharmacy in Southern Russia and the fifth largest in the whole Muscovite Empire.

Besides those in Moscow, pharmaceutical gardens were established in St. Petersburg in 1713 under the control of the chief pharmacist, the present Imperial Botanical Garden with the pharmacist, Johann Levkin, at the head; in 1720, in Astrachan, where in 1740 the very able pharmacist Madeburg controlled the garden; in 1763, in Tobolsk and in 1767 in Lubnach. The gardens had driers, heaters and laboratories, and were in the control of pharmacists. Besides the pharmacists, assistants were appointed who assumed the duties of educating the young people in botany in exchange for a course in chemical pharmacy. In those days these gardens were the best schools for teaching botanists, but were later transformed into botanical gardens.

The control of pharmacies generally and of pharmacy prices in 1721 was given to the College of Medicine, although about 1715, a control, apparently introduced by formal legal declaration existed. In 1739, by a special ukase, the Empress Anna Joanovna established medical colleges in St. Petersburg and Moscow. In 1716 St. Petersburg obtained in Amsterdam for 10,000 guldens the renowned cabinet of the pharmacist Leba. In 1751 the Pharmacopœia Lugdensis was employed. The oldest Russian pharmacopœia, properly speaking, the Field Pharmacopœia Castrensis, was issued in 1778 by the Medical College. The first dispensatory for doctors and pharmacists was published in 1765. The Pharmacopœia Navalis Rossica was published in 1783.

Catherine II opened the Academy of Science in 1726, previously established by Peter the Great, an institution in which the pharmacists, particularly the academicians, T. Lovitsky, A. Sherer, Model, and others, took a distinguished part. On January 12, 1755, the Empress Elisabeth Petrovna, by ukase, established the first Russian (Moscow) University, the opening of which took place on April 26 in that year. In 1873 by ukase the supreme head ordered the opening of the Medico-Surgical Instiitute at the Sekretnoi Infirmary, in which the pharmacist assistants were allowed to improve their knowledge of the sciences. The creation of the St. Petersburg Medico-Surgical Academy began on February 12, 1799, and the first conference took place in 1800. The first manipulator of the academy was the dispenser Marburg.

In 1806 a pharmaceutical section was created and a pharmacy opened at the Academy with Schvenson at its head. On July 28, 1808, a pharmaceutical school was opened at the Academy. During the time of Peter III, Anna Joanovni, Elisabeth Petrovna, various regulations, statutes, tables and instructions relative to the rank and operation of the pharmacy business are promulgated. On March 19, 1748, the privilege for the construction of factories for the production of sulphate of copper and aqua fortis were granted. Ovens were built near St. Petersburg for the preparation of alum, potash, saltpeter, sal ammoniac and asbestos.

Modern Pharmacy.

The wise legislation and measures of the preceding period exerted a very beneficial influence on pharmacy and pharmacists throughout the whole of the XIX century and the history of this period shows it to have been that of the most satisfactory development of Russian pharmacy. The soil so generously prepared in the past yielded rich fruits. In the new universities there was feverish activity in serious scientific work. Great credit belongs to the Derpt University where a pharmaceutical institute was established with rich laboratories and cabinets, which turned out the best equipped men in Russian pharmacy, men who had worked not only in pharmacies, in chemical factories and in various laboratories, but in various Government establishments. From the Pharmaceutical Institute came such distinguished leaders and teachers as Grindel, Ziller, K. Klaus, G. Dragendorf, and others, who became known throughout the world. Pharmacy associations were formed, among them being the Imperial Pharmaceutical Association, which was established in Petrograd on December 21, 1818, and under whose auspices a laboratory and school were opened. Pharmaceutical journals were issued.

On February 27, 1864, the first Russian pharmaceutical congress was convoked. The Medical College was merged into the Imperial Medical College, then into the Medical Government, Medical Department and the Chief Government Sanitary Inspection. A medical council was established. The publication of pharmaceutical statutes was inaugurated, these including regulations pertaining to the Government Pharmaceutical Section, rules for opening pharmacies, the interior management and equipment of pharmacies, pharmacy taxation, the sale of poisons and of strong acting substances, extra pharmaceutical business, the establishment and arrangement of village, district and homeopathic pharmacies, mineral water factories, chemical-bacteriological laboratories, fixing the rules and obligations of the pharmacist, his relations to the war services, etc.

All of Great Russia was covered with a network of pharmacies. The great development of science had out-distanced the ponderous machine of legislation which would not take account of the requirements of the time and could not comprehend the voice of the whole community, which with increasing insistency called for modern reform, and the extension of pharmaceutical education. For these reasons the end of the XIX century witnessed a general decline in the pharmaceutical business of Russia.

Present Day Pharmacy.

All the defects that had accumulated up to the end of the last century were plainly seen at the beginning of the present period. Political stagnation took place, and pharmaceutical university education went into decay in a manner that was plainly felt in the pharmaceutical business. Impossible conditions existed in which to perform the heavy and responsible work in the pharmacies. Young pharmacists, not knowing the causes of the disorder, began to blame their Mother, pharmacy, being quite unable to understand that the true cause of these defects was the antiquated organization of the pharmacy business. The younger mem-

(Concluded on page 274)

Biological Products for Pharmacists*

Rapid Progress Being Made in Bacteriological Science

By ROBERT P. FISCHELIS, Philadelphia

COMPARATIVELY few druggists have yet organized their biological departments on a scale to yield the profit that should accrue from this branch of the drug business. Doubtless this neglect has been due, in a large measure, to lack of knowledge of the possibilities from a business standpoint of making the drug store a biological station. Those who have tried the idea and have endeavored to build up a business on biological products are very well pleased with the results and it is difficult to see why there should not be a greater interest on the part of the rank and file to make the profit on biological products replace that which has been lost on some other commodities formerly handled to advantage by the retail druggist.

Business on biological products is a year-round proposition, but in order to make it so it must be given a certain amount of thought and there must be cooperation with physicians as well as some general advertising. A large part of the service connected with the supply of biological products is the ability to give information as to their character, method of production, storing and supply. The investment necessary is sufficient space for a good refrigerator, a fair stock of the products most frequently called for, and a conservative stock of those needed in special cases, as well as a little time each day on the part of the employer or one of the employees who makes it his business to keep abreast of the times as far as biological medication is concerned. The last-named investment is very important.

Recent Advances in Bacteriology

The sciences of bacteriology and immunology are making such rapid strides that few physicians are able to keep abreast of the most recent advances. They have learned to turn to the pharmacist for information on various drug products. Why should they not also turn to him for information on biologicals? Many drug store proprietors who are unable to give this department of the business the attention it demands designate one of their clerks to make a study of the subject and thus have someone ready to supply the information when it is asked for. Colleges of pharmacy are now giving special courses in bacteriology which fit their graduates to keep in step with the rapid progress being made in this science. A great deal of literature from various manufacturing houses is available on the newer products and this can be used to advantage by the pharmacist in connection with letters sent to physicians periodically advertising the biological department of the store.

When most of us speak of biological products we immediately think of smallpox vaccine and diphtheria and tetanus antitoxins, and our study of the subject is limited to these products probably because they are the only ones recognized in the Pharmacopoeia and are the ones mostly discussed in textbooks. We all know something about the manufacture of diphtheria antitoxin and smallpox vaccine, and the general tendency is to classify all bacteriological products along with the two mentioned. The object of this paper is to outline briefly some information regarding other serums, vaccines and bacterial vaccines, that will be useful to the retail druggist particularly if he caters to business along this line.

Serums Not Vaccines

One often hears physicians and pharmacists speak of "those vaccines" or "those serums," including in these terms the entire list of bacteriological products that are used in the treatment of disease, and it is not uncommon to hear the terms "vaccine" and "serum" used interchangeably without any apparent regard for their meanings. It should be borne in mind, therefore, that a serum is a product obtained by injecting horses or other domestic animals with toxins or bacteria in increasing amounts until the blood of the animal contains a sufficient number of antibodies to combat the disease and then bleeding and separating the serum that contains the antibodies from the solid portion of the blood.

In this connection, we should distinguish between antitoxin serums and antibacterial serums. The two serums recognized in the Pharmacopoeia are antidiphtheric serum and antitetanic serum. Both are antitoxic serums and have been popularly known as diphtheria antitoxin and tetanus antitoxin. They are prepared by injecting horses, not with the bacteria causing diphtheria or tetanus, but with the toxins generated by these bacteria. Antistreptococcic serum and antipneumococcic serum are examples of antibacterial serums, because in those cases the organisms causing the infections are injected into horses in order to produce the antibacterial serums. In the case of tetanus and diphtheria, the antitoxin can be separated from the serum by precipitation with the proper chemicals and the precipitated antitoxin is redissolved in physiological saline solution and standardized. In this way a considerable quantity of antitoxin can be concentrated into a very small bulk. In the case of antibacterial serums, the finished product is the blood serum itself.

The term "vaccine" refers to a living organism or virus used to produce a mild form of the disease, in that way stimulating the inoculated person or animal to produce antibodies and thus ward off infection. Smallpox vaccine and rabies vaccine are examples of vaccines. Quite a large group of products spoken of as vaccines are really not vaccines in the strict sense of the term, because they do not represent living germs. Among bacteriologists, they are known as bacterial vaccines or bacterins, consisting of suspensions of killed bacteria in physiological saline solution; and, when injected, they stimulate the mechanism of immunity to produce sufficient antibodies to ward off attacks of these organisms.

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* Read at the Spring Lake meeting of the New Jersey Ph.A. and contributed to the Era by the author.

Bacterial Vaccines

Bacterial vaccines, or bacterins, are by far the most numerous of the bacteriological products on the market and their use is being attended with considerable success. Prophylaxis against typhoid infection, respiratory infections such as common colds, meningitis, whooping cough, etc., is produced by the use of bacterial vaccines.

An improvement over the ordinary type of bacterin is the serobacterin or sensitized bacterial vaccine originated by Besredka of the Pasteur Institute of Paris. Serobacterins differ from plain bacterins in that they have been treated with specific immune serum and bring about a quicker immunizing response. To illustrate: the difference between typho-bacterin and typho-serobacterin is that typho-bacterin is merely a standardized suspension of killed typhoid organisms in physiological salt solution; whereas, typho-serobacterin is a standardized suspension of killed typhoid bacilli which has been sensitized by treatment with a serum prepared by injecting animals with typhoid organisms. This sensitization has the effect of reducing the local reaction that accompanies injection of bacterial vaccines and preventing severe general reactions which are sometimes caused by plain bacterins. Furthermore, the immunizing effect, when serobacterins are used, is almost immediate, manifesting itself within 24 to 48 hours; whereas, in the case of bacterins, several days are required to elicit any immunizing response.

Biological Products in the Present War

The present war has brought out many important things in the scientific world. Among the most important, if not the most important, are the facts which are being made known regarding the specific effect of some of the biological products which have been in use for a number of years. When the war began, neither side was prepared for the many cases of tetanus which developed in northern France due to the condition of the soil which had been highly cultivated for many years. Tetanus organisms abounded there and from 10 per cent to 12 per cent of the wounded developed tetanus and 90 per cent of these died of the disease. It did not take long to stop these enormous losses by the prompt use of tetanus antitoxin. It has been customary in the allied armies to give every wounded soldier an injection of 500 units of tetanus antitoxin at the first opportunity, followed by three other injections of 500 units each at intervals of a week, so that 20,000 units are injected over a period of four weeks. Our own boys receive two injections of 1500 units each, the first injection being given immediately after the wounded soldier is brought to the first aid station, and the other injection a week or two later. Injections of 1500 units can readily be made because of the highly concentrated serum that is being supplied from American sources. By precipitating the antitoxic substance and redissolving it in physiological salt solution and standardizing, 1500 units can be concentrated into as small a bulk as five mils and, of course, the injection of so small a bulk presents no difficulties.

Another serious infection to which the wounded soldier is exposed is gas gangrene. It has been proved conclusively that gas gangrene is produced by the bacillus Welchii, named for Professor Welch, of Johns Hopkins University, who discovered the organism. The effects of this bacillus are due to the toxin which it generates. It has been proved possible to prepare an antitoxic serum which will combat infections of this organism; in other words, gas gangrene is being combatted in the same way as tetanus or diphtheria, both of which are due to the formation of toxins and for both of which there are antitoxic serums. A so-called "dual purpose" serum is now being prepared which contains in the small bulk of ten mils, 1500 units of tetanus antitoxin and ten units (American standard) of gas gangrene antitoxin. This is the first protective dose administered to wounded soldiers to prevent both lockjaw and gas gangrene.

Prevention of Typhoid Infections

Typhoid has been eliminated in our armies by prophylactic vaccination. In the Spanish-American War we lost 2,744 men from typhoid alone. If the same percentage were to become infected with the disease during the present war our casualty list up to April 1, 1918, would number more than 217,000 from this disease alone. All this has been avoided by the simple expedient of injecting each man with the triple typhoid bacterin sometimes referred to as "triple vaccine," beginning immediately after arrival at army camps and cantonments. The "mixed typhobacterin," or "triple vaccine," mentioned, is made up of killed typhoid and paratyphoid A and B bacilli. The mixed vaccine is used because it was found that many men who had been immunized against typhoid fever later contracted paratyphoid fever caused by either the paratyphoid A or B organism. The so-called "triple vaccine" includes all three organisms and affords protection against them. Even including those cases where the men go to camp with the typhoid bacillus incubating in them—in every 100,000 there must always be some such "carriers"—the deaths to date in this war from typhoid number only eight, while as yet there has been no case whatever of ill effects resulting from the inoculation itself. In the French Army the monthly typhoid mortality is now less than three per million.

It is obvious that if every person outside of the army could be induced to submit to the same prophylactic vaccination against typhoid, the disease would just as quickly disappear from civil life.

Pneumonia

Health reports from army camps and civilian communities during the past Winter have made us realize the seriousness of the pneumonia menace. It has been known for some time that lobar pneumonia is caused by the pneumococcus, but serum treatment was in many cases a failure. This led to investigations which showed that there are various types of pneumococci and that serum effective against any one type is not effective against another. Researches at the Rockefeller Institute disclosed the fact that there are three fixed types of pneumococci and a fourth group of miscellaneous types. These have been named Type I, Type II, Type III and Type IV. The different types can be distinguished from one another by means of bacteriological tests, and it has been shown that Type I is responsible for about 33 per cent of all cases of lobar pneumonia and that the mortality from this type, when serum treatment is not used, is about 25 per cent. About 31 per cent of cases are due to Type II pneumococcus, the mortality rate being 32 per cent without serum treatment; 12 per cent of cases are caused by Type III pneumococcus, the mortality rate being estimated at 45 per cent. The fourth group of miscellaneous pneumococci causes about 24 per cent of all cases of pneumonia, the mortality rate, 16 per cent, being the lowest of all.

Experiments have shown that pneumonia due to Type I pneumococcus is amenable to serum treatment. Thus far pneumonia due to Type II and Type III has not responded very favorably to serum treatment and there has been no success with serum in cases of pneumonia due to any of the pneumococci in group IV. When it is possible, through bacteriological examination, to determine the type of the infecting organism, it is desirable to use the serums specific for that type. However, for many practitioners, particularly those residing in rural districts, who have not laboratory facilities at hand for making the diagnostic test, rather than deprive the patient of the benefit of serum treatment, since its early administration is of the utmost importance, it is advisable to use a polyvalent antipneumococcic serum, which is prepared by injecting horses with the three fixed types of pneumococci and therefore containing antibodies against all three types. The polyvalent serum is standardized against a Type I culture and must be as efficient in its protective power against pneumonia due to Type I as the Type I serum. Besides, it contains antibodies against Types II and III and is therefore the logical serum to use in all cases of lobar pneumonia.

Common Colds

It is generally conceded that "common colds," which so often lead to more serious complications such as pneumonia, are due to bacterial infections, and many annual sufferers from these infections have been relieved and have gone through a whole Winter without "colds" by resorting to prophylactic immunization with "influenza serobacterin mixed." In some of the army camps, mixed bacterins composed of standardized suspensions of pneumococcus, influenza, catarrhalis, streptococcus and staphylococcus organisms have been used to immunize our boys against infections from these bacteria. Unquestionably the day is approaching when most diseases due to bacterial infection will be conquered as has already been the case with a number, and it will be possible to immunize individuals susceptible to these diseases and thus prevent much suffering, to say nothing of the loss of time and inconvenience incident to long illness. Biological materia medica is still in its infancy. Less than 25 years ago diphtheria antitoxin, the first biological product manufactured and used to any extent by physicians, was first produced. Enormous strides have been made since then, and the present war is showing that the work along the lines of prevention and treatment with biological products is on a sane and sound basis. While many of our industries are engaged in the necessary work of providing the instruments for destruction, there is considerable satisfaction in the thought—and there should be particularly to pharmacists—that the medical and the pharmaceutical professions are unselfishly contributing their bit to the Conservation of Life.

COMPOUND MUSTARD OINTMENT

Volatile oil of mustard	1.00
Menthol	2.00
Camphor	4.00
Oleoresin of ginger	1.00
Turpentine gum	6.00
Lard	86.00

Dissolve the camphor and gum turpentine in 30 parts of melted lard (not too hot); when cool and ready to congeal, add the menthol, oleoresin of ginger, and oil of mustard; mix well, and then incorporate the balance of the lard (N. A. R. D. Journal).

Liberty Bonds Will Tame This

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NOTES ON CULTIVATION OF BUCHU

Buchu leaves are official in most pharmacopoeias, but not all are agreed as to the species recognized. There are two chief commercial varieties imported, however, these being denominated in the U. S. Pharmacopoeia as "short" buchu, obtained from *Barosma betulina*, and "long" buchu, obtained from *B. serratifolia*. The two drugs differ considerably in their constituents, the former usually being considered the best, although the long is the higher-priced variety. The plant is indigenous to South Africa, but its culture there has been neglected in recent years. According to Consul Samuel W. Honaker, of Johannesburg, the high price now prevailing is again stimulating interest in this plant, and the importance of meeting the demand is fully recognized.

As throwing some light on the cultivation of the buchu plant in South Africa, he sends to the Department of Commerce the following notes by G. R. Van Wielligh furnished to the *Agricultural Journal* of the Union of South Africa:

The buchu is a hardy perennial and evergreen shrub belonging to the rue family of plants. The leaves of the buchu, to which the value of the plant is due, are opposite or scattered and are flat and dotted with oil glands, and the margins are glandular, serrate, or, in some cases, almost entirely revolute. When touched or dry the leaves emit a strong aromatic odor, which is due to a volatile oil contained in the glands. This oil is greenish in color when pressed out of the cells and when left to dry upon the leaves forms a camphor-like substance.

Three Species Used for Medicinal Purposes.

There are three species of the plant used in medicine. While containing the same essential oil and camphor, they differ in the shape, appearance, and color of the leaves.

The kloof buchu (*Barosma serratifolia*) grows in a soil somewhat moist, but not wet. Its average height is 4 feet, but it sometimes grows as high as 10 feet. It thrives in kloofs (ravines), among shrubs and granite rocks and in the shade of trees, and is also to be found in altitudes varying from 500 to 1,000 feet above sea level. A black, sandy loam, containing plenty of decayed vegetable matter, is said to be favorable to its growth. The leaves of this species are dark green, resembling somewhat those of the orange tree, to which it is also similar, in that glands are shown in the lamina of the leaves.

Another species, the mountain buchu (*Barosma betulina*), is probably the most valuable, as it contains the greatest number of oil glands in its smaller light green leaves. It is more compact and dwarfed than the kloof buchu. It grows from 3 to 4 feet in height and is often found on mountain slopes at an altitude of 1,000 to 2,000 feet above sea level. A red, sandy loam, or red sandstone and quartzite, is said to be favorable to its growth.

The third species, *Barosma crenulata*, has larger leaves than the others. These leaves are 1 inch to 1½ inches in length and are of a smooth, leathery texture; they are ovate-oblong in shape, with serrate or granular margins. The oil glands are visible on both sides of the leaf. However, this species of the buchu is not so widely distributed and is consequently not so well known.

The buchu does not thrive in every soil. In its native state it is not found in earth having limestone as one of its component parts, nor in brackish or sandy soil and stiff clay. On the other hand, a black or red sandy loam, according to the species, impregnated with decayed vegetable matter facilitates its culture. However, good results are said to be obtained when the plant is cultivated on sandy loam, properly drained and deeply dug, but not irrigated by brackish streams.

Method of Cultivation

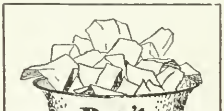
Plants can be grown from seeds or cuttings. In case the former method is used, the sowing generally takes place before the weather becomes cold. Boxes and beds are used for that purpose. Boxes are most often filled with a compost of vegetable mold and sand in equal parts, in which the seeds are buried at a depth of about one-half of an inch. They are then generally placed in the shade in a warm place and kept moist. After a few weeks have elapsed, the seeds spring up, and the boxes may then be shifted to receive the morning sun. As a rule, all the protection that is required is from sharp frosts and cutting winds, but the soil should be kept moderately moist and free from weeds.

If the beds are used they should be dug very deep, and some of the soil should be removed and replaced by a vegetable mold and sandy loam. Sometimes boards are placed on the edges of the beds, or stones or sod are piled around them from 12 to 13 inches in height. The beds are generally covered with branches to shut off most of the light, as too much exposure to the rays of the sun at first often causes damage. As the seedlings appear more light is allowed, but they should not be exposed to a baking sun to any great degree.

For the purpose of transplantation, which usually takes place when the atmosphere is not too dry or scorching, the ground is usually trenched or plowed to a depth of 2 feet to induce deep rooting. As a rule, the plants should be 5 feet apart in each direction, leaving ample room for the cultivator to pass between the rows. It is the general opinion that the best time to plant is when growth is dormant. In case it does not rain during this period it is customary to irrigate the ground.

After planting is completed no special care is taken other than to weed and rake the soil, so as to conserve the moisture. Raking should be done lightly in order not to disturb the roots, which although spreading in all directions, are not firmly anchored in the ground, as compared with most other shrubs. However, by deep trenching the roots are induced to penetrate the soil more deeply.

DON'T WASTE PAPER



A pound of paper saved saves three pounds of coal. Save waste paper but don't waste paper.

War Industries Board

The War Industries Board has issued a warning that paper must not be wasted, saying:

"PAPER IS ESSENTIAL: It has been placed on the priority list only on the express condition that all wastes be eliminated and every economy be practiced. In doing this the Government will use its best efforts to provide sufficient paper for strictly needful purposes but nothing more. Every distributor, converter, or user of paper is hereby notified that the continuance of his supply is dependent entirely upon the strict observance of the rulings of the War Industries Board, one of which is that paper must not be wasted. Failure to comply with this requirement will lead to the withdrawal of any or all priority privileges, without which the supply cannot be maintained."

The statistics of the production of potash for the first six months of 1918 received by the United States Geological Survey, Department of the Interior, to date show a total output of 20,000 to 25,000 short tons of pure potash (K_2O), indicating that the output for the entire year may reach 50,000 to 60,000 tons.

War's Effect on Chemical Industries

Present Increased Productions Must Be Provided For When Peace Readjustment Comes

By GRINNELL JONES, Chemist to the United States Tariff Commission*

WHEN peace is restored the competitive strength of the nations in all industries will have been profoundly altered. Chemistry and machinery have played a larger part in this war than in any previous war, and therefore the greatest changes may be expected in the metal working and in the chemical industries. Moreover, our new American cargo ships will make us more than ever interested in foreign trade. The Tariff Commission is actively studying these war disturbances in order to assist in the readjustment and reconstruction that must follow when peace comes.

Among the chemical industries, the first to feel the stimulus of war was the explosives industry. The expansion of American smokeless powder plants was sufficient to prevent a German victory in France and Russia in 1915. It is not revealing military secrets to say that there has been some growth since 1915. We all hope that the peace terms will be so satisfactory that the military explosive plants themselves will no longer be needed. Nevertheless, there will be a permanent increase in the competitive strength of the American chemical industries through the growth of the subsidiary industries which now supply the raw materials to the explosive industry.

Sulphuric Acid Production

Our production of sulphuric acid is at least twice what it was before the war. The growth has been largely in contact acid, and therefore when the demand for explosives disappears, the American chemical industries will have available large supplies of pure and concentrated sulphuric acid. Moreover, the growth of the acid industry has been made possible by a great increase in the production of American sulphur and by a smaller although significant increase in the mining of pyrites.

The nitric acid industry has grown relatively more than the sulphuric acid industry. The output of nitric acid from Chilean niter is now more than ten times as great as it was before the war.

The significance of this growth of the sulphuric and the nitric acid industries to our dynamite, dyestuff, and pyroxylin plastic industries need not be emphasized here.

Of greater significance than this stimulus to industries already well established has been the birth of new industries. We have a new synthetic ammonia and nitric acid industry. Plants have been built and, during the war at least, will be operated by the Government. When the full story of these plants can be told, it will reveal that American chemists have, under the pressure of war needs, been able to devise substantial improvements upon the Haber and Ostwald processes developed by the Germans before the war. These processes were the result of nearly two decades of work on these problems as a part of their military preparedness. It is not improbable that after the war nitric acid made from synthetic ammonia may prove to be cheaper than nitric acid made from Chilean niter. In any case American agriculture will assuredly have a new large source of nitrogenous fertilizer materials.

Output of Benzol and Toluol

In 1914 our production of crude light oil would have been sufficient for the production of only about 4,500,000 gallons of benzol and of about 1,500,000 gallons of toluol, and only a part of which was distilled. As is shown in our forthcoming report on the production of American dyes and coal tar chemicals, in 1917 our output of benzol was 40,200,000 gallons, and of toluol, was 10,200,000 gallons. In 1918 further substantial growth is to be expected through the installation of stripping plants at city gas works. The toluol is now going almost entirely into explosives as is also a considerable fraction of the benzol. When the demand for explosives disappears, it is to be expected that the prices of benzol and toluol will drop to the point where it will be profitable to add them to gasoline for motor fuel. A similar condition will probably exist abroad and, since America has the greatest known natural resources for the production of gasoline, benzol and toluol should be as cheap or cheaper here than abroad. Therefore the industries consuming benzol and toluol may be assured of ample supplies of these materials at favorable prices.

Phenol for the Industries

Before the war we had no synthetic phenol industry, whereas in 1917, as is shown in our forthcoming report, 15 plants produced 64,146,499 pounds of phenol valued at $23,715,605, most of which was used in making picric acid. If this new industry is to survive, there must be a greater consumption of phenol in the industries for peaceful purposes. Fortunately, phenol is used as an intermediate in the manufacture of some representatives of every class of finished coal-tar chemical products including dyes and lakes, photographic developers, medicinals, flavors, perfume materials, synthetic resins, synthetic tanning materials and explosives. Leaders in the chemical industries are already making plans for the industrial development of the uses of phenol when the phenol is no longer needed for explosives.

Another war-baby is monochlorbenzol, which was made during 1917 by eight American firms, with an output of nearly twenty-five million pounds, valued at a little less than five million dollars. The dye industry will use a part of this productive capacity permanently, but new discoveries by American chemists will probably be needed to utilize the total productive capacity. Incidentally, this product furnishes a new outlet for chlorine, a new by-product source of muriatic acid and raises a new problem in the utilization of dichlorbenzol, an unavoidable by-product.

Before the war there was but one producer of anilin oil in the United States. In 1917 there were twenty-three producers with an output of 28,806,524 pounds, valued at $6,758,535. As only a relatively small proportion of this substance goes into explosives, the peace readjustments will not be complicated by a collapse of a military demand, but will depend primarily on the competitive strength of the American industry.

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*Address delivered September 10 at American Chemical Society's meeting in Cleveland.

The war has also stimulated the production of mercury for the manufacture of fulminates. The American production has been about doubled since the beginning of the war. Formerly we had a balance of imports—now we have a larger balance of exports.

Uses for Poison Gas

Poison gas warfare is also destined to have a permanent influence in the chemical industries. Although there is no reason to expect that uses will be found for phosgene and mustard gas on a scale approaching the present and prospective military use, the plants erected for their manufacture need not prove a total loss when the military demand ceases. Nearly all of the noxious substances used in poison gas warfare require chlorine for their manufacture, and an increase in the production of chlorine in the United States is therefore certain. There is much hope that some of the substances produced as intermediate steps in the manufacture of the poison gases may be utilized for purposes other than warfare, but these are matters not yet to be discussed. Phosgene, except for the dangers attending its use, is an excellent reagent for many processes involving chlorination or dehydration and for making Michler's ketone. Fortunately, the risk in using phosgene is greatly minimized by the development of the new gas mask. The intensive work which hundreds of American chemists have been and are doing to improve the design of the gas mask will undoubtedly prove a blessing to workmen exposed to noxious fumes in chemical factories throughout the world when peace is restored.

Still another industry which has been stimulated by a direct war demand, is the manufacture of acetone, which is used as a gelatinizing agent in the manufacture of the explosive, cordite; as a solvent for airplane dopes; and in the manufacture of poison gases. Before the war acetone was obtained entirely as one of the products of the wood distillation industry, but there are now at least four new processes in commercial operation in the United States or Canada for the manufacture of acetone.

It has been found that glucose can be fermented by a suitable organism to give acetone directly. Butyl alcohol, is a by-product of this fermentation, and becomes commercially available in appreciable amounts.

The development of uses for butyl alcohol is an attractive problem.

Other Acetone Processes

The other processes for making acetone produce acetic acid or an acetate as an intermediate step, and may therefore permanently affect the acetic acid industry. The most obvious and perhaps the simplest of these processes depends on fermenting molasses to alcohol, which is then converted into acetic acid by the rapid vinegar process. The conversion of acetic acid into acetone is an old and well known process but the details have been improved.

Another process depends on making acetylene from calcium carbide. By the aid of a suitable catalyst, the acetylene is made to combine with water yielding acetaldehyde which may be readily oxidized to acetic acid. Still another process depends on fermenting kelp under such conditions that sodium acetate and potassium salts are secured.

The war has stimulated the production of many other products a few of which may be briefly mentioned; castor oil for lubricating airplane motors; phosphorus for incendiary bombs; barium and strontium nitrates for signal rockets. The output of soda ash has increased by 68 per cent. since 1914, and the output of caustic soda has more than doubled in that short period of time.

The Dye Industry

New conditions in the chemical industries have also been created by the curtailment of imports. As a direct consequence of this stoppage of imports from Germany a new American dye industry has been established. It is true that some dyes were being made in the United States before the war but the makers relied on Germany for the necessary intermediates, with the exception of a small amount of anilin made here by a single producer. During 1917, 134 different intermediates were made by 118 firms. One firm made 53 different intermediates. Dyes were made by 81 firms. The total production of dyes in the United States during 1917 was approximately equal in gross weight to the annual importations before the war. The exports of American dyes exceeded in value, although not in quantity or variety, our imports before the war. The dye industry is not dependent on any imported raw material except sodium nitrate from Chile. Many important dyes are still lacking, but indigo and alizarin are now on the market in significant amounts, and the vat dyes for cotton derived from anthracene are coming.

The Potash Outlook

A new potash industry has also arisen, but its future does not seem so promising as the future of the new dye industry. Here Germany has an inherent geological and geographical advantage. Although shipments from Germany ceased early in 1915 and although prices have advanced to about ten times the pre-war prices, the American production during 1917 was only about thirteen per cent. of our pre-war consumption. This relatively small production was obtained from many sources and by many processes. There is an excellent prospect that the recovery of potash as a by-product of cement mills will survive German competition and ultimately supply about one-third of our needs. In addition, significant amounts will probably be secured as a by-product of the pig iron blast furnace That the other branches of the potash industry can survive German competition is open to serious question.

EVOLUTION OF PHARMACY IN RUSSIA

(*Continued from page 268*)

bers of the craft seriously censured the fine old Russian professional methods, injured the prestige of pharmacy, did it injustice, and upset the trend of pharmaceutical life. Pharmacy did not merit such a censure, but the obstinate unwillingness to grant new, complete and urgent reforms must be condemned.

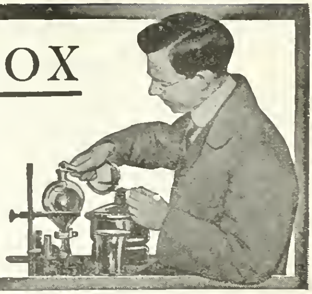
The great war has shown how false and antiquated were the circulars and measures recently issued. As a result, in a most serious moment for the Fatherland, Russia immediately experienced a medicine famine and, to our great shame, remained for a time, almost without medicines. Our false saviours held their peace. The strict judgment of history will pronounce its sentence on the really guilty ones for the destruction of our present day Russian pharmacy.

THE QUESTION BOX

The "How to Do It" Department

CONDUCTED BY PHARMACEUTICAL EXPERTS

For the benefit of ERA Subscribers



Benzyl Alcohol: Benzyl Benzoate

(J. M. W.)—Benzyl alcohol is obtained from essential oil of bitter almonds, or from benzaldehyde by action of potassium hydroxide, the chemical formula being C_7H_5O, or $C_6H_5.CH_2.OH$. It occurs as a colorless liquid with a faint aromatic odor; is soluble in ether, methyl alcohol and water (1 part in 25), and boils at 200-207° C.; specific gravity, 1.05 at 15° C. Benzyl alcohol is also obtained from benzoic acid, balsams of tolu and peru, and occurs to a small extent in oils which contain its esters, being used in conjunction with the latter. It is also prepared synthetically from toluene. Like all primary alcohols it oxidizes first to aldehyde and then to acid. It has little pharmaceutical interest and is usually mentioned because of its oxidation product, benzaldehyde.

Benzyl benzoate, $C_7H_5(C_7H_7)O$, is an ester of benzyl alcohol, and occurs as an oily, colorless substance, which boils at 340° C., and forms crystals at a much reduced temperature. It is difficultly volatile with water vapor and possesses a faint odor. At a low temperature it congeals to white crystals which melt again at about 20° C. In combination with benzyl cinnamate it is used principally as a "fixer" in perfumery manufacture, benzyl benzoate being an exceedingly good solvent for artificial musk. It is stated that while it requires 12 to 14 pints of spirit to dissolve an ounce of artificial musk, this amount is freely soluble in 4 ounces of benzyl benzoate on warming, and may then be mixed with other oils in any desired proportion. Benzyl benzoate has also been used to some extent as a fixative of flavors, as it makes the more volatile flavors permanent, especially in cases where the flavor has to stand prolonged heating, as in the confectionery industry, in making chewing gum, and for other commercial purposes. Balsam of peru consists of about 60 to 70 per cent of benzyl benzoate, while balsam of tolu contains about 7.5 per cent of an oily liquid, consisting of benzyl benzoate mixed with a little benzyl cinnamate. Except as benzyl alcohol and benzyl benzoate may exist in these natural substances, we have no information as to their therapeutic use in internal medicine. At the same time we believe that benzoate prepared synthetically has been used in 25 per cent oily solution in the treatment of scabies and other parasitic skin diseases, being applied as a sort of paint to the parts affected.

Expressed Oil of Laurel

L. D. Co.)—Expressed oil of laurel is obtained from the berries of the laurel tree, *Lourus nobilis,* a small evergreen tree extensively cultivated in many parts of Europe, either by pressing the pounded berries, or by boiling them with water, and then separating the oil which forms a layer on the water. The berries contain from 24 to 30 per cent of fat or oil which solidifies when cold to a granular, green mass, of a buttery consistence, and which has a characteristic aromatic odor and taste. Besides the fatty oil, laurel berries contain about 1 per cent of a volatile oil, together with starch and proteins. The fatty oil consists chiefly of laurostearin (glyceryl laurate), while the volatile oil, which is more viscid and less aromatic than that from laurel leaves, contains cineol, together with a sesquiterpene and a little pinene, geraniol, and eugenol.

From this description you will note that expressed oil of laurel is a natural product, and not a manufactured product, except that it is pressed out of the berries as described above. Some authorities state that the oil was formerly used externally in the treatment of rheumatism, but its use for this purpose is almost obsolete. Lewkowitsch states that it is now only used in veterinary practice. It would appear that it is sometimes adulterated with other fats (lard), colored green and made aromatic with the volatile oil, at least such adulterations have been reported. Some of the older authorities make a distinction between the oil obtained by expression from either the fresh or dried berries, as castor oil is expressed, and the oil obtained by boiling the berries in water and skimming off the oil. The oil made by expression is said to be more limpid and insipid than the oil obtained by decoction, which is buttery in appearance.

Powder for Exterminating Bedbugs

(J. W. H.)—It is doubtful whether the most effective bedbug exterminator can be made in the form of a powder, the claims of manufacturers of proprietary insecticides to the contrary notwithstanding. The fact that bedbugs live and breed for the most part behind mouldings, under loose wall paper, in picture frames, and in the cracks about the footboard and flooring of rooms, besides in the seams of mattresses and cracks of wooden bedsteads and other furniture, makes it difficult to bring any kind of a powder in contact with the insects for the purpose of destroying them. Of course, if one could lead the bug to the poison and then make the insect partake of the dose prepared for its demise, the result might be different. But insecticides in the form of powder cannot be effectively introduced into the recesses and crevices where the bugs spend most of their existence, and this is why the most effective exterminators are either in liquid or gaseous form. Gasoline, while very dangerous, is the most effective remedy we know of, while other combinations of the "non-inflammable" type are given on page 186 of the July, 1918, Era.

The use of bromine has been recommended for the extermination of various kinds of insects, including the bedbug. It is employed by first sealing up the room and then placing in it a small bottle of bromine, removing the stopper from the bottle, and then quickly retiring and closing the door. The slowly evolved fumes of the bromine penetrate every available space and create an atmosphere in which the bugs cannot breathe. After a short time the windows are opened and the room thoroughly aired. It is said that this method is employed in hospitals with good effect.

Here are two formulas for cockroach powder:

(1)

Insect powder	8 ounces
Borax	8 ounces
Sulphur	4 ounces
Oil of eucalyptus	2 drams

(2)

Borax	60 parts
Sugar	20 parts
Flour	15 parts
Cocoa	5 parts

Mix well and sift around where the roaches congregate. Many of the commercial powders for exterminating roaches, it is said, contain a small amount of sodium fluoride, a very effective insecticide.

Petroleum Emulsion

(J. V. H.)—The standard type of "petroleum emulsion" is that furnished by the formula given in the National Formulary under the title of "emulsion of petrolatum." This formula has been quite generally recommended, the introduction of expressed almond oil into the formula, it is said, greatly facilitating the process, the emulsifying agent being acacia. The "petroleum" employed is in the form of the "petrolatum" of the Pharmacopoeia, but we believe the process can be adapted to emulsify any heavy refined petroleum oil or commercial forms of petrolatum, the latter being melted previous to admixture with the expressed oil of almond and then triturated with the acacia. Other formulas are as follows:

1. Liquid petrolatum, 6 ounces; condensed milk, 3 ounces; syrup, 3 ounces; cinnamon water, 4 ounces; lime water, 4 ounces. Rub the liquid petrolatum with the condensed milk in a mortar and add, first, the lime water, then the cinnamon water, and lastly, the syrup, rubbing them well together to form an emulsion. This formula is given on the authority of Fenner, who states that what is known as mineral glycerin, glymol, albolene, glycoleum, etc., may be used in making the emulsion.

2. Liquid petrolatum, heavy, 5 fl. ounces; powdered acacia, 2½ ounces; powdered tragacanth, 2 drams; syrup, 2 fl. ounces; water, to make 16 fl. ounces. Flavor with oil of anise, cinnamon or peppermint. Mix the first three ingredients in a mortar, add 4 fl. ounces of water and triturate until the emulsion is well formed. Then add the flavor, the syrup, and finally the balance of the water. Saccharin may be substituted for the sugar, if desired.

3. An English formula: Liquid paraffin (petrolatum), B.P., 33 parts; benzoic acid, 0.05 part; saccharin, 0.05 part; oil of cinnamon, 0.1 part; decoction of Irish moss, enough to make 100 parts. This can be made satisfactorily in large quantities at a time—one gallon, at least.

4. Petrolatum (either light or dark), 4 ounces; olive oil, 14 ounces; powdered acacia, 3 ounces; powdered tragacanth, 1 ounce; syrup (or syrup of hypophosphites), 14 fl. ounces; water, to make 64 fl. ounces. Melt the petrolatum and mix with the oil. Allow the mixture to cool. Place the acacia in a dry mortar, add 6 ounces of the mixture, carefully measured; triturate lightly and rapidly, and then add 3 ounces of water Triturate to a smooth creamy mixture and then add alternately the balance of water and oil in small portions; add the tragacanth and finally the syrup. Shake well.

Books on Manufacture of Non-Alcoholic Beverages

(A. B. Co.)—To a large extent most of the literature relating to the manufacture of non-alcoholic beverages is scattered through the files of technical journals, and with the exception of the formulas and processes for the manufacture of fountain beverages, there is, so far as we are aware, no one book that is likely to contain all of the information you seek. However, the following books will be found to contain more or less of such material:

Dispenser's Formulary and Soda Water Guide	$1.50
Eberle, Soda Water Formulary	1.50
Hiss, Standard Manual of Soda and Other Beverages	2.50
Morris, Bottlers' Formulary	5.00
Sulz, Treatise on Beverages (old, but voluminous)	8.00
Walter, Manual for the Essence Industry	4.00
Wright, Old Time Recipes for Home Made Wines, Cordials and Liquors	1.50

A reference to files of the Patent Office Gazette, published weekly by the United States Patent Office, Washington, D. C., will also disclose a number of processes for making non-alcoholic beverages from malt and other products that have been patented durthe past three or four years. Of course, these processes are covered by patent and controlled by the inventors or their assignees, but a reference to the published claims on which the patents have been granted will show some of the recent lines of advance.

Powder for Blistered Feet

(J. W. H.)—The treatment of the feet depends somewhat on the systemic causes responsible for such conditions, and perhaps a physician should suggest the proper remedy. However, on general principles, excessive perspiration calls for frequent washing of the feet, and the daily use of dusting powders of an antiseptic nature. For blistered feet, the following powder is said to be excellent:

Salicylic acid	1 dram
Powdered zinc oleate	1½ ounces
Starch powder	3 ounces

Mix. The powder should be freely dusted over the feet and into the toes and heels of the socks before walking, and also, after changing the socks on returning.

Another powder consists of salicylic acid, soap, talc and starch. The powder renders the feet firm, induces an agreeable softness, and removes all unpleasant odor, its action being to prevent the formation of butyric, valerianic and other acids of the same family, which injure the feet.

Medical men have recommended the application to the feet, after bathing and drying them, of a 5 per cent solution of chromic acid, using a hair pencil for the purpose. Care must be taken in the use of the solution, as chromic acid is very active when applied to the skin. Two or three treatments are usually sufficient. Others recommend the application of a solution of potassium permanganate (20 grains in 2 ounces of water) to the soles of the feet and between the toes on retiring. After the application of the lotion it would be well to follow with a frequent use of an antiseptic foot powder.

Ravages of the army worm in the castor bean acreage of the South, particularly on the east coast of Florida, have called for the mobilization of an army of trained field men to combat the pest. More than twenty-five of the best-informed field agents of the United States Department of Agriculture have been sent out to save the crop, which is under Government contract and essential to war plans. The Federal agents are organizing the farmers and educating them as to the best ways of routing the worms, and state officials are co-operating.

The Progress of Pharmacy

Metallic Tin and Stannic Oxide as a Remedy for Boils

It has been noticed that among the tin workers in Beauce furunculosis is unknown, and metallic tin, or tin oxide, is regarded by them as a certain cure for boils. Frouin and Gregoiré have proved that both the metal and its oxide have decided bactericidal action. They found also that when administered to dogs for twenty consecutive days in daily doses of 2 grams no ill effects were evident, although the metal was absorbed, and could be detected in the urine for some time after administration had ceased. They then proceeded to treat 50 cases of furunculosis with doses of 50 cgms to 1 gram of powdered tin, or its oxide. The results obtained have been excellent. The boils disappeared in five to fourteen days, and there were no relapses (*Comptes rend.*, through *Pharm. Jour.*).

Reaction of Antipyrin with Para-dimethylaminobenzaldehyde—

Gautier describes a new reaction for antipyrin as follows (*J. Pharm. Chim.*): If to 10 mils of a 1: 100 solution of antipyrin 1.5 mils of 5 per cent alcoholic solution of para-dimethylaminobenzaldehyde are added, followed by 1 mil of strong hydrochloric acid, an orange color is quickly developed. On shaking out the colored portion with ether, or with benzene, the color is found to be insoluble in either of those solvents. When chloroform is shaken up with it, however, a part of the color is dissolved, and the separated solvent is tinted pink. If amyl alcohol is similarly employed, it is colored orange red.

Waterproof-Dressing for Cart Covers—

In reply to a request for a process for waterproofing cart covers, the "Chemist and Druggist" gives the following information. The white or colorless applications employed for waterproofing canvas consist of two baths, one containing soap (½ ounce to a gallon of water), and the other aluminum acetate, made as follows:

Aluminum acetate	1 pound
Lead acetate	½ pound
Water to make	8 gallons

Dissolve the salts separately, mix the solutions, allow to settle, and pour off the clear solution.

The canvas is first soaked in the soap solution for twenty-four hours, drained, and hung up until partly dry. The canvas is then immersed for a few hours in the solution made as above. Finally, the fabric is rinsed and dried by artificial heat. Another method is to dip the canvas in a 10 per cent solution of anhydrous lanoline in petrol, the lanoline being previously liquefied by means of carbon tetrachloride.

Carbon Tetrachloride as a Cleaning Agent—

To be reasonably safe from fire hazard, 55° naphtha should contain at least 30 per cent, 63° naphtha at least 45 per cent, 70° naphtha at least 50 per cent, and 76° naphtha at least 70 per cent of carbon tetrachloride. These mixtures will burn if spread on readily combustible material, and their use is recommended only when pure carbon tetrachloride cannot be used (*Drugs, Oils and Paints*).

Rapid Estimation of Sugar in Urine—

Mayer gives the following method for a rapid estimation of sugar in urine: A mixture of 10 cc. of the urine with 10 cc. of 15 per cent sodium hydroxide solution is diluted to 50 cc. with water, and a 2.5 per cent solution of copper sulphate gradually added, with shaking, until the precipitate has almost entirely redissolved and a just perceptible permanent turbidity remains, which increases somewhat on keeping. Under these conditions, each cc. of the copper sulphate is equivalent to 0.1 per cent of dextrose. If the urine contains more than 4 per cent of dextrose, only 5 per cent should be used, while if less than 0.5-1 per cent is present, 20 cc. should be taken. Should the urine give a precipitate of calcium phosphate, it should be previously treated with a measured proportion of sodium hydroxide solution, and a suitable fraction of the filtrate should be submitted to the above titration. Very turbid urines should be filtered, and excessive quantities of albumin removed by boiling before a sample is submitted to the above analytical process (*Munch. med. Wochschr.*, through *Chem. Abstracts*).

Absorption of Odors by Magnesium Carbonate—

P. Henry Utech, in a paper read before the Pa. Ph.A., calls attention to the power of magnesium carbonate to absorb foreign odors, its behavior in this respect being similar to that of willow charcoal. If allowed to remain in close contact with such aromatic substances as camphor, asafetida, naphthalene, etc., it is rendered practically unfit for pharmaceutical uses.

Making Corks Impervious—

Heat the corks for several hours at 44° to 48° C. in a solution prepared by dissolving 15 Gm. of gelatin in 24 Gm. of glycerin, and 500 cc. of water. The corks are then dried in a dark place and immersed in a mixture of 2 parts of petrolatum and 7 parts of paraffin kept warm at 40° C. Corks so treated are said to be impervious to air and acids.

Eucalyptus Oil Production—

The eucalyptus oil industry is now of considerable importance in New South Wales. The oils are used in pharmacy, in the separation of metallic sulphides, and for perfumery and flavoring. There are about 300 species of eucalyptus in Australia, but of these not more than 25 varieties can be utilized for their oil. Up to this time the oil products of about 160 eucalypts have been determined. Among the varieties it is stated that *E. staigeriana* gives a high yield of citral-bearing oil, which after rectification is an excellent substitute for lemon oil and very much cheaper. The principal terpene in this oil is laevorotatory limonene (*Perf. and Essential Oil Rec.*)

Production and Sources of Bismuth—

According to *Commerce Reports*, issued by the Bureau of Foreign and Domestic Commerce, the world's demand for bismuth is about 600 tons annually, the principal sources of the metal being Bolivia and Australia. The chief use is in alloys, including those used for stereotype metal, for silvering mirrors, fusible boiler plugs, automatic sprinklers, electric fuses, low melting solders, and dental alloys; and for tempering baths for steel. Salts of bismuth are used medicinally and for porcelain painting and enameling, and in staining glass.

Brazil Introduces State Quinine Service—

The *Brazil Medico* reports that the president of the republic has signed the bills appropriating 400,000 milreis for an "official service of quinine" in prophylaxis of malaria—"necessary for the sanitation of Brazil," and providing for the "organization of commissions of physicians and their aids to initiate the service of rural prophylaxis, combating the endemics which ravage the interior of the country." The president calls on every Brazilian to aid in this great campaign against endemic diseases in general. The success already attained in eradicating yellow fever in Rio, augurs well for the success of the new drive. It was not announced before, he says, because of financial reasons. Prof. M. Pereira aroused the country with his cry, "Brazil is a vast hospital," and the movement for prophylaxis on an extensive scale was soon inaugurated and this important step taken (*Jour. A. M. A.*).

Polish for the Finger Nails—

A preparation recommended by a French perfumery journal under the above title is the following:

Oxide of tin	250 grams
Powdered tragacanth	1 gram
Glycerite of starch	3 grams
Orange flower water	100 grams
Alcohol	a sufficient quantity.

Add enough alcohol to the powdered tragacanth in a mortar to produce a smooth paste. Then add the glycerite of starch and the orange flower water, triturating to a homogeneous mucilaginous fluid. Add the oxide of tin and knead into a plastic mass which should not be too stiff. A little more water may be added, if necessary, to bring it to this condition. A little rosin is sometimes added to impart to the nails a delicate pink tint.

Sensitiveness of Shaking-Out Method in Alkaloid Extraction—

No published data appear to be available as to the limit for the usual alkaloidal reactions on the extracts obtained by shaking out an extremely dilute, alkaline, aqueous solution of a free alkaloid with an immiscible solvent. Experiments were made with 200 mils of water, containing various minute quantities of alkaloids. This was rendered alkaline with 0.5 grams of anhydrous sodium carbonate, and shaken out with 10, then 5, mils of chloroform. The bulked chloroform extract was evaporated, and the residue taken up in 1 mil of sulphuric acid 1: 10. The acid liquid was divided into three watch glasses. To one of these a drop of Bouchardat's reagent was added; to the second, a similar quantity of Tanret's reagent; and to the third, of Sonnenschein's alkaloidal precipitant. In the first two an almost immediate opalescence or precipitate, and in the third, an ultimate amorphous precipitate indicated the presence of an alkaloid. Under these conditions the presence of 0.0001 Gm. of alkaloid in the 200 mils of water, or 1: 2,000,000, could be readily detected. This was not the limit of sensibility. With the reagents above named, it was at least three times greater than above indicated. In the case of aconitine, a positive green reaction was obtained from a dilution of 1: 4,000,000. For the ordinary detection of alkaloids in water, therefore, reliable results may be obtained by testing as little as 100 mils of the original sample. This has been proved to be the case with aconitine, atropine, brucine, cocaine; colchinine; eserine, pilocarpine, strychnine, veratrine and conine; in fact, all of the commoner toxic vegetable bases. Under these conditions, stagnant water and well water containing putrefying organic matter gave no positive reaction for alkaloids (*Comptes rend.*, through *Pharm. Jour.*).

Manufacture of Sugar of Milk—

In reply to an inquiry the *Chemist and Druggist*, London, gives the following outline of the processes employed for the manufacture of sugar of milk: (1) The Swiss process consists in evaporating the whey to dryness, 50,000 litres yielding about 1,250 kilos. The solid obtained is dissolved in water at 65° C. in a copper pan, ½ to 1 kilo of alum added, the solution filtered through animal charcoal, boiled down to a syrup, and allowed to crystallize on cords or sticks. (2) Ramage's method consists in evaporating slightly alkaline whey to half its bulk, adding an acid to remove the casein, and then, after concentrating, precipitating the milk sugar by adding spirit. (3) In Kennedy's process the milk is concentrated to between 11° and 27° Beaume and the product chilled to 32° F. until the sugar crystallizes. The crystals are removed by submitting the liquid to centrifugal action and washing with cold water.

Aluminum Hydroxide as an Excipient—

Crouzel proposes the use of aluminum hydroxide instead of the usual excipents such as vaseline, lanoline, etc. The aluminum hydroxide is prepared by precipitating a saturated solution of alum with ammonium hydroxide, washing the precipitate and drying at 30° C. This new excipient has the following advantages; It is unctuous to the touch, is tasteless and is not modified by exposure to air; it does not stain the skin or clothing; it does not attack metals and has no action on the skin and mucosa; it softens the tissues and does not impede absorption of the medicaments for which it is used as an excipient; it retains water energetically and does not reduce potassium permanganate; aqueous plant extracts, metallic salts (soluble and insoluble in water), alkaloids, sulphur and in general all substances used in pomatums are readily incorporated in this excipent; it affords excellent contact with cutaneous surfaces (after simply washing with water and without use of soap); it may be placed in various containers (wood, pasteboard, etc.) without penetrating the same and it retains organic substances with great affinity (*Rep. Pharm.*, through *Chemical Abstracts*).

Skin-Ink for Radiography—

An ink for marking positions on the skin of patients who are being radiographed may be made as follows:

Pyrogallic acid	1 gram
Methylated spirit	10 cc.
Strong solution of ferric chloride	2 cc.
Acetone, enough to make	20 cc.

The solution is best kept in a bottle with a camel's-hair brush attached to the cork so that it can easily be painted on. The mark is a brownish-grey as first, but after a few hours turns a brilliant black (*Br. Med. Jour.* through *Chemist and Druggist*).

Sodium Bicarbonate with Bismuth Salicylate—

A. Astruc and J. Cambe report that in compounding a prescription in which bismuth salicylate and sodium bicarbonate were employed vigorous evolution of CO_2 was observed, although the bismuth salicylate was neutral to litmus and did not contain free salicylic acid as is sometimes the case; this effect cannot be attributed to any other ingredient employed and is ascribed solely to the association of bismuth salicylate and sodium bicarbonate. No evolution of CO_2 occurred when sodium bicarbonate was replaced by sodium carbonate, Na_2CO_3 It is recommended that the formulas be modified by substituting sodium carbonate for sodium bicarbonate (*Rep. Pharm.*, through *Chemical Abstracts*).

India Gum Resin—

A recent U. S. Treasury Decision (No. 37712) throws a little light on the identity of so-called "India gum resin," which is said to be used as an adulterant for gum chicle and not to possess any therapeutical properties, and therefore is not a drug. It appears that it consists of a resin extracted from jelutong or similar or pseudo gums by a process somewhat elaborate, accomplished by the use of solvents followed by evaporation.

Pollen and Hay-Fever—

Ever since "hay-fever" began to be regarded as a manifestation of an anaphylaxis-like hypersusceptibility of certain persons to the pollen of some plants, it has become important to recognize the specific product responsible for the attack that the sensitive subjects experience. Indeed, in all present-day consideration of the clinical significance of anaphylaxis, it is essential to detect the source of the allergic substance so that it can be removed, avoided or perhaps combated by a suitable immunization procedure. It is asserted that the hay-fever prevalent in Europe is dependent chiefly on a protein substance found in the pollen of most grasses, while that of America, which occurs chiefly in the autumn, is caused by the pollen cells of the *Ambrosiaceae* and *Solidaginae*—plants that are generally distributed on the North American continent and bloom in August and September. The disease occurring in China is caused by another plant, the *Ligustrum vulgare*.

Attention has been called by a California botanist to the observation that in the region of the United States west of the Rocky Mountains hay-fever may be produced by an almost entirely different flora from that which causes it in the Eastern States and in Europe, and that the exact species involved must be determined in each case before treatment for immunity is undertaken. This statement is the outcome of the discovery, among other features, that the spring type of hay-fever, which is troublesome in the Sacramento Valley, is attributable to a walnut tree pollen. In the city of Colusa it was noted that the native California black walnut *Juglans californica* var. *Hindsii* Jepson) was much used as a street tree, that the abundant pollen sifted down over the city just at the time when the disease was most prevalent, and that the disease disappeared soon after the close of the flowering period. It was also learned that when patients left the regions temporarily to escape the disease they were free from the symptoms, except when passing through towns where the black walnut grew. Finally the botanical characters of the pollen were exactly those which one would expect in a hay-fever plant. Since this evidence all pointed to the walnut as probably the chief offender, samples of the pollen were gathered and biologic tests were made with positive results. Similar observations were made elsewhere in the same region. Hall states that the treatment of numerous hay-fever subjects in the Sacramento and neighboring valleys to render them immune to hay-fever is now under way, and that the serums prepared from black walnut pollen are the ones most used. It is expected that by this means the spring type of the malady can be largely eliminated in those districts. A more direct method would be to remove the trees, or, better yet, to graft the tops over to English walnut, which rarely, if ever, causes hay-fever. The assumption that tree pollens play only a minor role, if any, as causative factors in hay-fever must now, if we follow Hall, be abandoned. Perhaps more attention should be directed promptly to some of the Eastern forms—(*Journal of the A. M. A.*).

Tea Oil from Hankow—

In a despatch to *Commerce Reports,* Consul General Edwin S. Cunningham of Hankow, China, reports a falling off during the past year in the exports of tea oil from that place. It would appear that the product known as tea oil is not produced by the tea plant, but is expressed from the seeds of *Thea sasanqua,* known as the "ch'a-yu kuo-tzu," a relative of the true tea plant, from which it may be readily distinguished by its hairy shoots. It is a shrub, common as a wild plant in the sandstone ravines of north central Szechuan. In parts of eastern China it is abundantly cultivated for the sake of the oil, but in the west only in the plantations of An Hsien. It is, however, reported as being cultivated in the Department of Kiung Chou and elsewhere. The oil is used to adulterate cabbage oil, and by Chinese ladies as a dressing for their hair. The refuse cake is valued as a fertilizer, and when applied to rice fields is said to destroy the earth worms, which often attack the young rice plants.

War Time Restrictions for Pharmacy—

At the recent meeting of the Utah Pharmaceutical Association, W. F. Jensen, Commissioner of Commercial Economy of the State, delivered an address in which he discussed the restrictions placed upon various businesses to conform with the appeal of the Government to render the assistance it needs to win the war. Since his appointment to office, many men have been released by cutting out extravagant delivery service, the reduction to one delivery a day releasing 2000 men from inactive service. As to closing hours in drug stores, the Commissioner said that the basic principle of the new order is the closing of stores at six o'clock five days and at nine o'clock on Saturdays, and closing all day on Sundays and holidays. Refreshments can be sold after hours and on Sundays and holidays. Prescriptions can be filled, prepared drugs and patents can be sold, and also merchandise that can be used for sanitary or medicinal purposes.

He recommended that the members of the association agree on an opening and closing hour, and that their stores be closed part of the day on Sundays and holidays. The druggists should open at 8 A. M. and close at 10 P. M., employ as many women as possible and work only one shift if practical. Each drug store should use but three flavors of ice cream, and cut down the number of fountain syrups to ten or possibly eleven. Following a discussion of the Commissioner's address, a motion was adopted directing the incoming president to appoint an industrial committee to work in conjunction with Mr. Jensen.

Toxicity of Mercuric Chloride—

Sansum, following a study made upon the administration of mercuric chloride to dogs, concluded that when 4 mg. or more of the salt per kilogramme of body weight has entered the tissues at large, death regularly occurs, and that we have no adequate grounds for believing that death is preventable by any known form of treatment. Whereas subsequent studies may add to our knowledge, it would appear that persons who have recovered from mercuric chloride poisoning owe their lives to the fact that a lethal dose has never gained access to the extraportal circulation. Practical therapeutic efforts should be directed frankly toward the accomplishment of two things: 1, Mechanical removal of the poison from the lumen of the alimentary tract. 2, Antidoting the poison before it leaves the portal circulation—that is, particularly before absorption (*Jour. A. M. A.*).

Several camphor refineries in Formosa and elsewhere have been amalgamated into the Dai Nippon Camphor Company, and this year's supplies to the company consist of 2,000,000 kin of Formosan camphor and 1,830,000 kin of the home product; a total of 3,830,000 kin, as compared with 5,500,000 to 6,000,000 kin formerly supplied to the refineries which now form the company. It is further stated that actual supplies are only about half the quantity promised, and that refining works have been obliged to suspend operations owing to the shortage of crude camphor. The authorities have ordered the Dai Nippon Camphor Company to furnish supplies to certain American manufacturers at favorable prices.

Japan's Camphor Monopoly

In view of the great development of Japan as a manufacturing nation, it is only in natural sequence that her factories should absorb an ever-growing proportion of the Formosan production of crude camphor, says the "Perfumery and Essential Oil Record," a London publication. When this tendency is coupled with increasing difficulty in keeping up the supplies derived from the great island home of the camphor tree, it will be seen that the amount of raw gum available for European and American refineries is likely to be a gradually diminishing quantity until the export from the Japanese Empire practically ceases altogether.

There are, we believe, still plenty of camphor trees in Formosa, but the readily accessible districts are becoming exhausted, and, owing to the difficulty of transport and the savage nature of the interior country and its inhabitants, new forests are not readily opened up. In these circumstances we may well ask if the world's consumption of refined camphor is in the near future to be entirely met by Japan. Of course, no blame can be alleged against our Eastern Allies in preferring to export the finished article rather than the rough product of the Formosan stills, but British and American manufacturers will certainly look round for other sources of supply of their raw material, and at the outset the prospect does not appear too promising. Plantations in Florida, Algeria, and elsewhere are still in their infancy, and comparatively little assistance can be expected from them for some years. Time was when China produced considerable quantities of crude camphor, which was a regular item on the British market, but reckless destruction of the trees to meet the demand of the day, without any regard to the future, has, if not killed, seriously maimed, the "goose which laid the golden egg."

INDIAN POISONS

The annual report of the Chemical Examiner, Madras, under the present holder of the office, Lieutenant-Colonel Miller, I. M. S., has been cut down to such modest proportions that it no longer contains interesting if gruesome, details of tragedies with which Colonel van Geyzel used to fill his report, says the "Madras (India) Mail." With the present need for economy in paper this is not to be regretted; but we must confess that we have often missed the fuller and more interesting report. Among the poisons in regard to which investigations were made there are some mentioned in the report which prove how difficult it is to control poisoning in India by a Poisons Act. The poisons referred to are *nerium odorum,* (the sweet-scented oleander), *caloptris gigantea,* or the *madar,* and *dhatura.* Now these are all common plants in India, the first being found in almost every garden, while the other two may be found growing prolifically in almost all waste spaces. The poisonous properties of each of these are well-known to the people, and over their use it is impossible that any sort of control can be exercised. The roots of the sweet-scented oleander are well known to be very poisonous, and it is curious that this property of the plant is indicated in its vernacular names. The meaning of the Sanskrit name for the plant signifies "horse-destroyer," while the Arabic and Persian names have a similar meaning, "asses' bane." The latter name is curious in view of the fact that the Italian name for the European variety of the same plant, *ammiazza l'asino,* has a similar meaning. *Caloptris gigantea,* one of the commonest and most widely distributed of jungle shrubs in India, is one of the most valuable plants of its kind.

CULTIVATION OF BLACK MINT

The feasibility of beginning the culture of black mint in the United States for the production of menthol and oil is the subject of a special report by Vice Consul E. R. Dickover, of Kobe, Japan, as the result of inquiries from this country. He states that several attempts to import black mint plants have been frustrated by the long journey across the Pacific, during which the plants died. Once an arrangement was made with a steamer purser to care for the plants and they arrived in good condition, but were killed by disinfection in entering the country. The consulate now is attempting to obtain mint seeds, a difficult task since the plant is cultivated almost entirely from slips.

Two widely different climatic areas are devoted to the cultivation of mint in Japan corresponding to the northern Pacific coast of the United States and to Virginia and North Carolina. About 92% of the Japanese mint is grown on the Hokkaido island, where the average winter temperature is 22 degrees and the summer temperature 60 degrees, with a rainfall of 38 inches. The remaining 8% of the Japanese crop is grown on Nippon, where the average temperatures are 38 and 75 degrees and the rainfall 42.5 inches.

The mint plant requires a light, well drained soil. The roots are planted at the end of November. The plant attains full growth during the summer months and is cut in late July, during August and in early September, the third cutting yielding the greatest percentage of oil and menthol crystals. Steaming and pressing in barrels prepares the leaves for the factories, where the oil is extracted by a process of freezing and pressing.

USE OF THE TERM BENZOL

The commercial term benzol when used without any modifying phrase means the aromatic hydrocarbon benzene, C_6H_6, usually in the pure form. The word benzol is preferred in trade to benzene, owing to the likelihood of confusing the latter with the aliphatic hydrocarbon, benzine, derived from petroleum and totally different in chemical structure and properties, says the "Color Trade Journal." There are also various grades of benzol known—90 per cent., 50 per cent., and 30 per cent. benzol. These terms are applied to benzol mixtures of which 90, 50, or 30 per cent. distils over at temperatures up to the boiling point of water. The composition of these three grades of commercial benzol is as follows:

	90 per cent. benzol	50 per cent. benzol	30 per cent. benzol
Benzene	80.9	45.4	13.5
Toluene	14.9	40.3	73.4
Xylene	2.2	12.4	11.7
Impurities	2.0	1.9	1.4

At the present time, owing to the much higher value of toluol than benzol, these grades are not so often met with in trade as formerly. In nearly all cases the benzol and toluol are separated and sold as such in practically a chemically pure condition.

The harvesting of castor beans in California will be begun at an early date and it is estimated that the output will exceed 200,000 gallons, or about one-tenth of the output of the entire country. The bulk of the crop has been grown in sections where olives are produced in commercial quantities and the olive oil plants will be used for making castor oil. Practically all of the high grade oil will be taken over by the Government for airplane use.

New Books for Pharmacists

AN INTRODUCTION TO THE CHEMISTRY OF PLANT PRODUCTS. By Paul Haas, D. Sc., Ph.D., lecturer on chemistry, Royal Gardens, Kew, etc., and T. G. Hill, A.R.C.S., F.L.S., reader in vegetable physiology in the University of London, University College, etc. Second edition. 6 x 9 inches, 411 pages, cloth, $3.50 net. New York. Longmans, Green & Co.

This volume is the result of an attempt to provide students who are assumed to have some acquaintance with chemistry, with an introductory account of the chemistry and biological significance of some of the more important substances occurring in plants. These substances are discussed under the following headings: Fats, oils and waxes, and the closely-related group of substances known as phosphatides, phospholipins or lecithins, the last name being derived from a Greek word meaning egg yolk, from which substance the first representative of the class was prepared; carbohydrates which include the sugars, starches, gums, cellulose and related substances; the glucosides; the tannins; plant pigments; nitrogen bases, which include alkaloids, ptomaines, etc.; colloids; proteins, and the enzymes. All of these substances play an important part in the economy of the plant, while some of them, as starch, sugars, etc., are food materials stored up for future use in various tissues.

To the pharmaceutical chemist working with the chemical analysis of organic drugs, this book has much to attract, especially the sections on glucosides, tannins and the nitrogen bases. According to these authors, the term alkaloid has been differently defined at different times, a suggested definition being that of a nitrogen base of vegetable origin whose nitrogen atoms forms part of a ring, but this, they say, is not entirely satisfactory, as it would include substances which, owing to their properties, could hardly be classed as alkaloids, and excludes others, such, for example, as herdenine. The glucosides are also important products of vegetable origin, a considerable number being used in medicine, as arbutin, digitalin, salicin, strophanthin, etc., while saponins, which also belong to this class of substances, are very widely distributed in the higher plants, and produce emulsions which are characterized by their great stability, their emulsifying property permitting them to be used as substitutes for soaps.

If one is to fully understand the real significance of botanical drugs, he must start with the living plant and follow as closely as possible the cycle of its development, for it is from such study that he will obtain most of the facts relating to the plant products utilized by man. The application of chemistry to the determination of plant constituents has thrown a great light on the processes and products of vegetable growth, and in this direction the authors have succeeded in presenting a most interesting and valuable contribution to the literature of plant products.

A LABORATORY MANUAL OF ELEMENTAL QUALITATIVE CHEMICAL ANALYSIS for students of medicine, dentistry, pharmacy and science. By A. R. Bliss, Ph.G., Ph.Ch., A.M., Phm.D., M.D., profession of pharmacology, School of Medicine (Atlanta Medical College), Emory University, etc. 2nd edition, revised and reset. 8 vo., 194 pages, cloth, $2.25. Philadelphia, W. B. Saunders Company.

As a manual for students this book has been held in high regard by instructors, the National Association of Dental Faculties recommending it as the required text for laboratory instruction in qualitative analysis. In the course outlined in this volume, the author presupposes that the student possesses a fair knowledge of the fundamental principles of physical and chemical theory, and is reasonably familiar with the simple operations of solution, crystallization, neutralization, etc., before beginning laboratory work. He is then ready to take up preliminary analytical work, the methods described by the author being presented in a very logical manner and in such a way that the student is sure to understand the whys and wherefores of methods.

Part I of the book deals with these fundamental principles as they relate to analysis by a discussion of the peculiarity of acids, bases, and salts in aqueous solution, under such divisions of the subject as ionization, electrolysis, reversible reactions, mass action, hydrolysis, chemical action of ions, etc., the section ending with a grouping of the metals, bases, or cations —seven groups in all. Part II takes up the detection of acids or anions, these for convenience being divided into three groups, viz., acids or anions precipitated from neutral solution by barium chloride; acids precipitated from dilute nitric acid solution by silver nitrate; and acids not precipitated by barium chloride or silver nitrate. Part III outlines the procedure for the analysis of "unknowns," the examination depending upon whether the substance to be examined is a gas, a solution or a liquid; a solid, but non-metallic; or a solid which is a metal or an alloy.

A careful examination of the book confirms us in the belief that the author has confined his definitions entirely to the practice side of medicine, for but few terms are defined which are of pharmaceutical or veterinary import, although such terms are to be included in the general considerations of medicine. For the use of the family physician, the nurse or the general seeker after information of a medical character this limitation of the scope of the work is evidently desirable, as enough is given about the different subjects to really be informative and the same time connect each particular subject with the practice of medicine as it relates to the cure of disease. The various articles on hygiene, nursing, sanitation, etc., some of them extending over several pages, are typical of the treatment each subject has received, and they all give the reader a true view of the importance of each in the modern practice of medicine.

TEXTBOOK OF PHYSICAL CHEMISTRY. By Azariah T. Lincoln, Ph. D., professor of physical chemistry, Rennselaer Polytechnic Institute. 12 mo., 547 pages, cloth, $3.50. New York. D. C. Heath & Co.

Although the author states that this book is intended primarily for the use of classes beginning physical chemistry, the more advanced student will also find it most serviceable. It contains, first, a short review of the fundamental concepts necessary to show the relationship of the elementary chemistry the average student has had with that usually incorporated in a course of physical chemistry. Then follows a logical development of the subject by means of a presentation of experimental data with the statement of the laws, succeeded by an explanation of the facts by the formulation of the theory. The limitations are then emphasized by the presentation of experimental data which appear to be abnormal, with the subsequent modification of the theory to explain these, and, in some cases, to show that the facts are not in accord with present theories.

To aid the student to acquire a true perspective of the subject, the chronological sequence of the main advances in chemistry and their historical setting is illustrated by recording after the names of the men who have been influential in developing the science of chemistry, the date at which each man was actively engaged in the work with which his name is associated. Except in but few cases, the subject matter is presented by the employment of elementary mathematics only—arithmetic and algebra, and this material has been selected by the author with reference to imparting information to the student, its fundamental character, and the technical importance of the facts as well as the theoretical considerations. Special emphasis has been placed upon the equilibrium reactions in gases with technical uses as illustrated by means of problems, while the conception of phases is discussed, particularly in the formulation of the Phase Rule, with illustrations of its industrial importance and applications.

The theories of solutions are presented with the idea of enabling the student to become familiar with their experimental basis, the assumptions involved, and their limitations. This discussion is extended to a consideration of concentrated and nonaqeous solutions, the aim of the author being to give the student a working knowledge of the prevailing theories in order to make the voluminous literature more accessible to him.

A TEXT-BOOK OF BACTERIOLOGY. A practical treatise for students and practitioners of Medicine. By Philip Hanson Hiss, Jr., M. D., late professor of bacteriology, College of Physicians and Surgeons, Columbia University, New York City, and Hans Zinsser, M.D., professor of bacteriology, College of Physicians and Surgeons, Columbia University, bacteriologist to the Presbyterian Hospital, etc. Fourth edition. 8 vo., 852 pages, limp, $3.75. New York and London. D. Appleton and Company.

The application of bacteriology to the solution of many important problems arising in medicine, veterinary surgery, agriculture and the various industries has created a demand that some knowledge of this science be possessed by those engaged in many lines of work. Of course, the problems of general bacterial physiology and certain fundamental technical procedures are common to all fields of investigation, but from no other point of approach is such a breadth of conception attainable, as through a study of bacteria in their relation to disease processes in man and animals. Thus medical bacteriology gives to the practice of medicine in general methods and knowledge of the widest application.

In the book before us, the authors have embodied the latest researches in an endeavor to present the subject in a practical manner, dealing with infection and immunity and with methods of biological diagnosis and treatment of disease, so that the student and practitioner of medicine, by becoming familiar with the underlying laws and principles, may not only be in a position to realize the meaning and scope of these newer discoveries, but may be in better position to decide for themselves their proper application and limitation.

In this new edition has been incorporated a section on Pathogenic Protozoa written by Major Frederick F. Russell, of the Medical Corps of the United States Army, which, we are informed, has been written with the definite purpose of giving medical workers concise information concerning important pathogenic species with especial consideration of their common occurrence, the methods of their detection and recognition, and correlation to the diseases which they incite. Other sections showing the subjects considered are the following:

The general biology of bacteria and the technique of bacteriological study; infection and immunity; pathogenic microorganisms; exanthemata and diseases caused by filtrable virus, and bacteria in air, soil, water, and milk.

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Would You Write a Jingle for $150?

It might be worth that to us. We are offering $400 in prizes for jingles or rhymes that will best advertise

Zymole Trokeys

For Husky Throats

$150, first prize; $100, 2nd; $75, 3rd; $25, 4th; and five $10 prizes. Verses must be brief and reach our Jingle Department before December 15th, 1918

Nine big magazines, read by over 20 million people, are telling your customers about this contest: Literary Digest, Cosmopolitan, Life, Judge, Metropolitan, Red Book, American, Theatre, and Great Lakes Recruit.

"Connect up" with our drive. Write a jingle yourself. Push Zymole Trokeys. Keep them on the counter. Send for window display.

FREDERICK STEARNS & COMPANY
DETROIT, MICHIGAN
New York San Francisco
In Business Over 60 Years

DRUG TRADE ROLL of HONOR

To honor the men of Pharmacy serving in the war against Autocracy the ERA wants to publish a complete roster. Send full particulars to 3 Park Place, New York.

MAKING THE SOLDIER FIT THE UNIFORM

Members of the King's County (N. Y.) Pharmaceutical Society are telling a good story about one of their members who is now serving Uncle Sam in the Army. When this recruit, who was gifted with rather rotund proportions, interviewed the supply sergeant to be outfitted, considerable difficulty was encountered in finding a blouse to fit him. Finally the one with the largest circumference in the stock was handed him with a "There, I guess that will go you," from the sergeant.

"But," said the pharmacist-recruit, "I can't button it."

"Aw, yes you can," replied the sergeant, giving the unhappy rookie a swift punch in the "bread basket" that nearly knocked the wind out of him, and buttoning the garment before the concaved "tummy" had a chance to return to normal.

"But," gasped our comrade, "I can't breathe."

"See here," exploded the non-com, "That blouse is all right. It is you who are all wrong, but you'll be all right in a few days."

"And he was right," affirms the quondam druggist. "After a week or two on kitchen police, I had no trouble buttoning the blouse."

KIEDAISCH BROTHERS NOW IN SERVICE

The two brothers whose portraits are shown here represent the third generation of druggists in the Kiedaisch family of Keokuk, Iowa. The grandfather, J. F. Kiedaisch, Sr., started the business in 1873, and it is still in the family under the style, J. F. Kiedaisch & Son. J. F. Kiedaisch, Jr., father of the soldier boys, is a Ph. G., Philadelphia College of Pharmacy, class of 1886.

John F. Kiedaisch

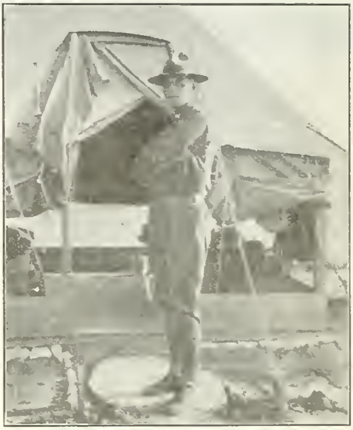
Norman Kiedaisch

John F. Kiedaisch is a graduate of the University of Iowa, class of 1914. He is attached to Medical Replacement Unit, No. 24, Camp Wadsworth, Spartanburg, S. C.

Norman Kiedaisch is a graduate of the Era Course in Pharmacy, and passed the Iowa State Board. He is a member of Co. A., Fourth Officers' Training Camp, Camp Pike, Ark.

PHARMACIST WARD NOW LIEUTENANT

First. Lieut. Carl Ward, who is serving his country with a motor supply train in France has been associated with the drug business for several years, having been in the employ of Dr. C. C. Ward of Crisfield, Md. He is rated as an assistant pharmacist under the laws of Maryland. Lieut. Ward is almost as much a soldier as a pharmacist, having been a member of the Maryland National Guard for some time. He served with the Maryland troops on the Mexican Border, with the rank of Second Lieutenant. He was promoted to First Lieutenant when the United States entered the Great War. He is twenty-four years old and married.



Lieutenant Carl Ward

ONE OF THE ERA FAMILY

Volney D. Granade, formerly a druggist employed by G. C. Raymond, at the Plaza Drug store, Augusta, Ga., now a soldier in the Medical Department, attached to the Post Hospital, Fort Scriven, Ga., feels that he is a member of the Era family as he passed the Georgia State Board of Pharmacy after studying the Era Course for about six months.

THOMAS V. STILWELL KILLED IN ACTION

The casualty lists of August 29, 1918, contain announcement of the death in action of Vierzy, France, of Thomas Vincent Stilwell ,of the Class of 1915, Sheffield Scientific School. Since graduation he had been connected with A. A. Stilwell & Company, of New York City, importers and exporters of oils and chemicals.

Mr. Stilwell entered the first Officers' Training Camp at Plattsburg, New York, on May 14, 1917, receiving a commission of 2nd Lieutenant in the Regular Army on August 15. He was assigned to the 23rd Infantry and sent abroad immediately. His mother, Mrs. Arthur A. Stilwell, resides at 118 West 121st Street, New York City.

Max Colton, registered drug clerk of Newark, N. J., is a sergeant in the Medical Department, U. S. A., and now in France. He appears in the center of the above picture in the act of supporting two stalwart American soldiers.

RED CROSS SERVICE FOR OVERSEAS

R. W. Adams, druggist, of Boston, Ga., who enlisted some time ago in the Red Cross for service overseas, was the guest of honor at a dinner party given recently by his friends in his home town. The local branch of the Red Cross also served an informal buffet luncheon as a farewell compliment to Mr. Adams, who awaits orders to sail for his field of work.

DRUG CLERK WRITES FROM FRANCE

The following interesting letter was received recently by Charles H. Buck, druggist at 5228 Broadway, New York City, from a former junior clerk, now fighting in France.

Dear Mr. Buck:

I hope that you will forgive me for not writing sooner. Most of the time during the past two months, I either was in a position where I could not write, or else had the blues.

Our regiment, as you may have heard, is now at the "front." We have been a long time getting here, but finally reached our destination. It sure is great where there is some excitement going on.

This Fourth of July is one that I will be able to remember. Although fireworks have gone to rest in the States, they make up for it "Over Here." We had the greatest display of fireworks that night. I tried to write that day, but there seemed to be too many fragments of shells scattering around. It made me hustle to get my helmet in order to save my head.

I don't mind being in the midst of bursting shells now. Still we hug our dug-outs when shelled.

They write me that it is very hot in the States. That is something which we still lack, although it is July. The nights especially are very cool. You know how much I feel the cold. There are times when I get a warm feeling, and that is when I think of being back of the soda fountain, holding a glass of orange phosphate in my hand.

I will be able to stand almost anything if I get back. Sleeping on a picket fence will be nothing. It is no use to say you cannot do a thing, because you can. I am hard, and getting harder every day, hard as the steel in shrapnel shells.

I am in the best of health, with the exception of a cold which seems to trouble me when it is damp. We have some small tablets of Brown's Mixture, nothing so good as Buck's cough syrups, especially "stock cough."

In case we get to a rest camp I will be able to write oftener, but you never can tell what's next. This is the fourth month over here, and I haven't seen or heard of anybody I knew. Still they write and tell me that there is nobody left in Kingsbridge, and that everybody is either in France or on the way.

Sincerely yours,
Michael.

The writer is Michael Seefchak, M. D. 30th Infantry.

ENSIGN SCHIEFFELIN'S EXPLOIT

Dr. William Jay Schieffelin has received a letter from his son, Naval Ensign John Jay Schieffelin who took part recently in the destruction of a U-boat. Ensign Schieffelin is 21 years old and was a student at Yale when the United States entered the war. He enlisted last year and was sent abroad in the Naval Flying Service. He was pilot of a seaplane carrying Lieut. Cutler, when they sighted a submarine and the Lieutenant dropped a bomb which disabled the U-boat and a destroyer was able to ram and sink it.

Dr. R. R. Morris, part owner of the Somerset Pharmacy, Crisfield, Md., is now serving in France as a Captain in the Medical Officers' Reserve Corps. Carl Ward, a clerk in the same store is also in France, a First Lieutenant of Infantry.

M. GLOVER GREGORY, pharmacist with L. M. Monroe, Sr. & Jr., New Canaan, Conn.; corporal, radio school, Louisville, Ky.

ALBERT W. VEHLE, clerk with Wm. Muench, Syracuse, N. Y.; seaman, 5th Reg., 3rd Co., Naval Training School, Newport, R. I.

LOUIS J. DENYS, drug clerk, Manchester, Conn.; hospital service, Camp Devens, Ayer, Mass.

A. C. HANKINS, secretary Hankins Drug Co., Inc., Daytona, Fla.; sergeant 1st class, Medical Department, 508th Light Field Artillery; at the front in France.

C. E. FREEMAN, prescription department, Hankins Drug Co., Inc., Daytona, Fla.; sergeant, Medical Department, U. S. A., in France.

A. W. IRWIN, prescription department, Hankins Drug Co., Inc., Daytona, Fla.; sergeant, Medical Department, U. S. A., Macon, Ga.

MAX COLTON, registered drug clerk, Newark, N. J.; sergeant, Medical Department, U. S. A., in France.

O. W. REEB, proprietor Reeb's drug store, Paducah, Ky.; 2nd lieutenant infantry, Camp Gordon, Atlanta, Ga.

L. L. BRADHAM, junior drug clerk and partner in Mitchell's drug store, Sumter, S. C.; sergeant, Medical Supply Department, Base Hospital, Camp Jackson, Columbia, S. C.

R. R. MORRIS, part owner of Somerset Pharmacy, Crisfield, Md.; captain, Medical Reserve Corps, U. S. A.; now in France.

WAYNE J. MILLER, junior drug clerk, Graham, N. C.; hospital apprentice, U. S. Navy, Hampton Roads, Va.

DUANE HOBART, drug clerk with Peter Bykowski, Toledo, Ohio; Hospital Corps, Camp Beauregard, Alexandria, La.

CARL C. KING, son of F. H. King, Delphos, Ohio; pharmacist, base hospital, Camp Taylor, Louisville, Ky.

ROY C. CHARRON, M. C. P. '13, Boston, Mass.; 2nd lieutenant, Chemical Service Section, N. A., assistant section chief, Emergency Laboratory Section Pyrotechnic Division, American University, Washington, D.C.

J. A. MAGETTI, formerly with Arighi & Ballerini, Napa, Cal.; U. S. Medical Corps, Camp Lewis, Washington.

JEROME G. MEYER, son of F. G. Meyer, secretary of the Meyer Bros. Drug Co., St. Louis, Mo.; with aviation squadron, France.

WILLIAM H. MEYER, Ph. G., formerly with Samuel G. Becker, St. Louis, Mo., Camp Greenleaf, Ft. Oglethorpe, Ga.

WILLIAM OSBORNE, Jr., druggist with Dr. M. L. Porter, Danforth, Me.; sergeant Evacuation Hospital No. 6, A. E. F., France, A. P. O. 740.

VOLNEY D. GRANADE, with G. C. Raymond, Plaza drug store, Augusta, Ga.; private, medical department, Post Hospital, Fort Scriven, Ga.

RALPH A. WILSON, member of firm of A. C. Wilson Co., Oelwein, Ia.; Central Machine Gun Officers' Training School, Co. 22, Camp Hancock, Augusta, Ga.

BURNET SMITH, son of G. F. Smith, P. C. P. '80, president Smith Drug Co., Newport, Tenn.; Medical Department, Evacuation Hospital No. 8, France.

ISADORE LIPOWSKY, clerk for F. G. Koch, Mamaroneck, N. Y.; Gas Service, U. S. A., Washington, D. C.

National Association Retail Druggists

Report of Annual Meeting Held in New Orleans, Sept. 16-20, '18

WHILE in point of attendance the twentieth annual meeting of the National Association of Retail Druggists was smaller than usual, owing largely to the scarcity of help, which made it impossible for delegates to leave their stores, as well as the increased cost of travel, the organization adopted a number of resolutions and did much work that shows the association is very much alive to the problems confronting the drug trade in the present crisis. Patriotism was the keynote of the convention and in all of the addresses made, the American viewpoint was kept in the forefront. Shorter hours and earlier closing were given more serious consideration than ever before, for it was thought that if time and wages could be in some way standardized, there would be less difficulty in getting young men to go into the drug business and to prepare for it as a life work.

Greetings and Oratory

The convention was called to order by President Walter H. Cousins in the Gold Room of the Hotel Grunewald on Monday evening, the Rev. Alphonse E. Otis, S. J., president of Loyola University, extending a very cordial invitation to the visitors. Addresses of welcome by Governor R. G. Pleasant of Louisiana, and Mayor Martin Behrman of New Orleans, followed, both speakers eloquently describing the glory and beauty of the State and city in true Southern style. Hon. Charles F. Harding, State Senator, Cincinnati, Ohio, replied to the addresses in a speech delivered with pleasing eloquence and patriotic fervor. Walter Parker, secretary of the Association of Commerce, spoke along economic lines, saying that American resources after the war would be utilized to generate facilities for future development.

W. H. COUSINS

John R. Taylor, of New Iberia, La., president of the Louisiana Pharmaceutical Association, was absent, but the greetings of that organization were conveyed by Christian Schertz, president of the New Orleans Ph. A., who also spoke on behalf of his own organization, August C. Flach, president of the New Orleans Drug Club, extended the hospitality of that association, and invited the delegates to attend a stag party to be given in their honor by the Club. Charles H. Huhn of Minneapolis, former president of the N. A. R. D., responded in his usually happy manner, and then Mrs. Christian Schertz extended the greetings of the ladies of New Orleans to their feminine guests. Mrs. J. H. Riemenschneider, of Chicago, president of the W. O. N. A. R. D., replied to Mrs. Schertz and renewed the pledge of the organization for both loyalty and cooperation.

M. T. Breslin, of New Orleans, extended the greetings of the A. Ph. A., and P. A. Capdau, former president of the La. Ph. A., made an address in which he pleaded for a standardization of working hours and wages.

President's Address

The annual address of President W. H. Cousins gave a review of the activities of his office during the past year, and also made a number of recommendations, as follows:

That the National Association of Retail Druggists

(a) Co-operate with the Government during the war and go on record as making the successful prosecution of same to victory the paramount purpose of our efforts both as individuals and as a national body.

(b) Look more closely after the druggists of the South with a view to building up its membership in the densely populated sections of the southern states.

(c) Urge better treatment of pharmacists at the hands of the Government in recognition of what they have given and the sacrifices they have made to help win the war.

(d) Urge a greater interest in affairs at Washington

S. C. Henry,
Secretary

M. T. Breslin,
Ex-president N. A. R. D.

W. Bodemann,
Chairman Tel. Co.

A. diTrapani,
Delegate

by our members and closer co-operation with our Legislative Committee and our General Attorney in legislative matters affecting the drug trade.

(e) Impress upon its members the importance of making a personal matter of their legislative wants by writing insistent personal letters to congressmen and senators from their own districts.

(f) Recommend that its members enter actively into politics insofar as state and national legislators are concerned turning their stores into friendly political clubs where issues affecting the drug trade may be discussed with candidates before election.

Officers' Reports

The report of Secretary S. C. Henry stated that the N. A. R. D. had gained 1,236 members during the past year and that the association's journal had gained 1111 subscribers. The work of his office in explaining the new conditions brought about by legislative enactment and other causes during the past year had been unusually heavy. The organization department had kept a force of six organizers in the field throughout the year, and the secretary had spent much time in attending meetings of the various National, State, and local organizations, disseminating information of interest to the N. A. R. D. and its affiliated bodies.

Treasurer Grant W. Stevens, of Detroit, reported that his books as of August 31, 1918, show assets of $37,653.65. The accounts payable are $2,384.50; miscellaneous, $70.35. The surplus is $37,198.80.

Executive Committee's Recommendations

The Executive Committee, consisting of James F. Finneran, Charles H. Huhn, James P. Crowley, Robert J. Frick, Charles F. Harding and Theodore F. Hagenow, presented its report in which was discussed the present status of the price maintenance question, the work of the Drug Trade Conference, social diseases, and other topics of interest to the members. The recommendations made by the committee were couched in the following language:

That we go on record in opposition to any proposal which seeks to consolidate our pharmacy boards with any other board, commission or department.

That we consider the advisability of increasing Association dues.

That we consider the advisability of increasing subscription price of the "Journal."

That we carefully consider the subject of social diseases as presented to us during the convention and take such action relative to it as the conditions justify.

Should Defeat Rainey Amendment

The report of the Legislative Committee, submitted by Frank T. Stone, chairman, contained the following recommendations:

The use of all honorable means by the organized drug trade and pharmacy to defeat the Rainey bill as incorporated in the revenue bill.

Organized opposition to defeat the proposed increase in the tax on non-beverage, or industrial alcohol.

Support of the proposed tax on proprietary preparations to be paid by the consumer at the time of purchase in the form of a stamp, canceled and affixed by the retailer, in preference to a manufacturer's tax and a floor tax on retailers.

Support of the Edmonds Pharmaceutical Corps Bill, or a similar measure, providing for an intelligent and efficient organization of pharmacists in the Army, thus insuring to American soldiers the same pharmaceutical service in times of war furnished them in times of peace.

Support of deferred classification for pharmaceutical students the same as for medical, dental, veterinary and divinity students, to the end that the public may continue to receive pharmaceutical service at the hands of trained pharmacists qualified under the laws of the states.

Support of the continued exemption of drugs and medicines from the listing of less essential industries by the War Industries Board.

Support for preferential treatment for those industries manufacturing the articles constituting the stocks of merchandise of retail druggists necessary to be handled by them in order to make it possible for them to dispense drugs and medicines.

Support for the enactment of a standard resale price law—the Stephens, or Kelly bill, or some similar measure.

Hearty co-operation with all branches of the Government in its prosecution of the war to a successful issue.

The Telephone Committee through Wilhelm Bodemann, chairman, reported that as the Government had taken over all wire companies, the new order required that druggists should stand by and do some watchful waiting. The action of Postmaster-General Burleson in issuing an order that all telephone companies should confine extensions and betterments to meet war requirements and vital commercial needs, vindicated the position of the Committee's work in the past in support of the "pay-as-you-go" theory and unconditional opposition to more than one company for a city or community. The Postmaster-General's order directs the companies to co-operate in making extensions in cases where two telephone systems are operating in the same area.

U. S. P. and N. F. Propaganda

The U. S. P. and N. F. Propaganda Committee reported that the past year had been a fairly busy one for the members, and a progressive one in the movement of getting back to first principles in medicine and pharmacy. The report stated that druggists should become more aggressive in their endeavor to acquaint the members of the medical profession with the official U. S. P. and N. F. preparations, and this plan ought to include a recommendation to all medical colleges to include the teaching of this department of medicine in their curricula. More attention should also be paid to the teaching of pharmacy to apprentices, for such a system would give proprietors better assistants, better clerks, and better managers. The pernicious activities of the medicine peddler and the aggressive dispensing doctor should be curtailed, with the end in view that only duly licensed and registered pharmacists be allowed to compound and dispense medicines and to sell medical appliances of a mechanical nature, as the druggists license intended that he should do. Referring to the meeting of the United States Pharmacopoeial Convention schedule for 1920, the Committee stated that an effort should be made to replace the present class of official fluidextracts, as well as the official tinctures, either wholly or in large part, by fifty per cent tinctures, or by some other representative class of medicine. This would enable the pharmacist to again become his own manufacturer in large measure, and would be of incalculable value to the public, inasmuch as pharmacists would be able to furnish a more reliable class of vegetable preparations than is possible by the present system, and it would enable them to get the financial reward due them for their life work. The association should reiterate its previous professed stand in favor of an amendment to the Pure Food and Drugs Act to discontinue the iniquitous double standard for official medicines or for any medicament bearing an official

James F. Finneran,
Chairman Executive Committee

Geo. W. McDuff,
Auxiliary Legislative Committee

Charles H. Huhn,
Executive Committee

title. "Section 7 of the law," the report stated, "does a great injustice to pharmacists and pharmacy, is grossly deceptive to the public, and totally disregards the rights of every honest citizen of the United States. It should be repealed."

These reports took the usual course and the final disposition of the recommendations made therein appears in the resolutions finally adopted by the association.

In the despatch of business the association this year made a record that will be hard to beat. In previous years the organization's work was not completed until well into Friday, but this year officers were elected and installed and everything closed up on Thursday afternoon.

Officers Elected

The following officers were elected: President, Charles Harding, Cincinnati, O.; 1st vice-president, W. A. Orrin, Indianapolis, Ind.; 2nd vice-president, H. B. Mayer, Memphis, Tenn.; 3rd vice-president, Adam Wirth, New Orleans, La.; secretary, Samuel C. Henry, Chicago, Ill.; treasurer, Grant W. Stevens, Detroit, Mich.

James F. Finneran, of Boston, was re-elected chairman of the Executive Committee. Charles H. Huhn, of Minneapolis, was selected to succeed himself on the same committee, and Walter H. Cousins, retiring president, was given a place on the Executive Board.

Harrison Narcotic Act Discussed

Probably the greatest interest of the convention centered about the discussion of Section 6 of the Harrison Narcotic Act. In a bill introduced into the House by Representative Rainey, it is proposed to repeal the section named. The Legislative Committee in reporting on this amendment to the association said:

"This bill covers six printed pages and the last paragraph, at the bottom of page 6, repeals Section 6 of the Harrison Act in one sentence. Ostensibly the bill is designed to increase the special tax on manufacturers from $1.00 per annum to $24.00, on wholesalers from $1.00 to $12.00, on retailers from $1.00 to $6.00, and on physicians, dentists, veterinary surgeons and other lawful practitioners from $1.00 to $3.00 per annum, $1.00 being provided as the special tax in the present law. The bill further provides an internal revenue tax on opium and coca leaves and any compound, salt, derivative or preparation imported into or manufactured in this country at the rate of 1 cent per ounce, and any fraction of an ounce in a package shall be taxed, as an ounce, such tax to be paid by the importer, manufacturer, producer or compounder thereof in the form of stamps affixed to the bottle or other container. The purchase, sale, distribution, or dispensing of narcotic drugs shall be made only in or from the original stamped package and the absence of the tax-paid stamp shall be prima facie evidence of violation of the law. While the ostensible purpose of the Rainey bill, as stated, is to increase the revenue, the 'joker' is to be found in the last paragraph, repealing Section 6 of the Harrison Law, referred to. Briefly, the effect of the repeal of Section 6 would be to interfere seriously with the legitimate and necessary use of narcotic drugs in medical channels, greatly to the detriment of the public as well as pharmacy and the drug trade."

The sentiment of the Convention was strongly in opposition to the Repeal of this Section of the Harrison Act, as it would restrict the sale of many commonly sold remedies containing small quantities of narcotics, such as cough medicines, paregoric, etc.

Considerable time was given to the consideration of the attitude of the retail druggists toward the control of venereal diseases. Two representatives of the Social Hygiene Division of the War Department of Training Camp Activities were given the privilege of addressing the Convention. These men brought home to the delegates their responsibility in regard to the handling of medicines calculated for the treatment of diseases of this nature. The Convention went on record in its resolutions as to its willingness to co-operate as outlined by the Government, and also on its own account drew up a resolution expressing ideas as to how the physician should be supervised in the same capacity.

Resolutions Adopted

1. Whereas, the proponents of compulsory health insurance continue their activities in an effort to force such a measure upon the people of the several states; and

Whereas, we believe such Prussianized legislation to be inimical to the best interest of the public and detrimental to the practice of pharmacy, therefore, be it

Resolved, that the N. A. R. D. be and hereby is requested to reiterate its opposition to such obnoxious measures, and to lend its assistance to the pharmacists of the various states in their efforts to prevent the enactment of compulsory health insurance laws.

3. Whereas, the present national emergency demands the whole-hearted, sincere and loyal support of our Government by every true, loyal citizen; and

Whereas, this emergency calls for the support and cooperation of the pharmaceutical industry with the Government, in order that the aims and purposes of our Government in this world war may be carried on to a successful issue; therefore be it

Resolved, that the N. A. R. D. be and hereby is requested to pledge the loyalty and support of our members to the President of the United States and our Government in every effort that is put forth toward winning the war and to this end we pledge our unqualified support and entire resources and abilities.

4. Whereas, the present world war has clearly demonstrated the power and control exercised by foreign manufacturers over our chemical supply; and

Whereas, many of the chemicals formerly secured exclusively by importation are now manufactured in this country; therefore, be it

Resolved, that the N. A. R. D. do again re-affirm its attitude by appealing to the President and Congress to do all in their power to encourage the developing of this most essential industry for the welfare of our people and be it further

Resolved, that the N. A. R. D. be and hereby is requested to pledge its members not to buy or use any drugs or products of alien enemy manufacturers.

6. Whereas, under existing patent and trade mark laws of the United States, the foreign manufacturers of medicinal products are granted privileges which they do not enjoy in their home markets; and

Whereas, certain foreign manufacturers of medicinal products, taking advantage of the privileges thus granted to them, have demanded unwarranted and excessive prices for such products; and

Whereas, the burdens produced by such demands fall heavily upon the citizens of the United States and most heavily upon those least able to bear such burdens, namely, the sick and affilicted; and

Whereas, the N. A. R. D. has consistently sought to have the Congress of the United States so amend existing patent and trade-mark laws as to prevent a continuance of this unfair and unjust practice therefore be it

Resolved, that the N. A. R. D. be and hereby is requested to renew the appeal of pharmacists of the United States for a proper modification of the patent and trademark laws of this country, and be it further

Resolved, that the N. A. R. D. be and hereby is requested to lend every possible assistance toward promoting the enactment of congressional measures designed to abrogate or suspend such patent rights.

7. Whereas, the salary paid the clerks in the Postal Sub-Stations established in drug stores throughout the United States is in many cases not sufficient to pay help to properly conduct said Postal Contract Stations; therefore be it

Resolved, that the N. A. R. D. through its representative in Washington, bring this matter to the attention of the Postmaster General and obtain better remuneration for said Postal Contract Stations.

10. Whereas, many persons have been permitted to become registered pharmacists, both by examination and otherwise, without first becoming citizens of the United States; and

Whereas, such individuals are not amenable to the Draft Regulations and may continue in business to the detriment of citizens who are constantly being called from their business to the colors; and

Whereas, it does not seem just and equitable that special privileges be accorded by state laws to persons not citizens when such privileges are denied to citizens; therefore, be it

Resolved, that the N. A. R. D. go on record as being opposed to the registration of all persons as pharmacists who are not citizens of these United States or who have not at least taken out first papers certifying their intention of becoming citizens.

Be it further resolved, that the secretary of the N. A. R. D. call the attention of the National Association of Boards of Pharmacy and all state boards of pharmacy to this resolution requesting them to take any possible steps in their power to make it effective.

19. Whereas, deferred classification to finish their studies is not now granted to present or prospective students in recognized colleges of pharmacy; and

Whereas, there already exists such an alarming scarcity of graduate pharmacists, that after the war the supply will not be adequate for the public needs, therefore

Be it resolved, that the N. A. R. D. requests the proper authorities in Washington to promulgate such regulations and rulings as shall enable students of pharmacy in recognized colleges to finish their training before being called into military service.

20. Resolved, that the N. A. R. D. support the continued exemption of drugs and medicines from the listing of less essential industries by the War Industries Board.

21. Resolved, that the N. A. R. D. support preferential treatment for those industries manufacturing the articles constituting the stocks of merchandise of retail druggists necessary to be handled by those in order to make it possible for them to dispense drugs and medicines.

23. Whereas, it is a matter of record that venereal diseases are the greatest single menace to the armed forces of the United States; and

Whereas, the Government has considered it of such importance that it has created a Division of Venereal Diseases in the U. S. Public Health Service, with Colonel C. C. Pierce in charge; and

Whereas, a determined effort is to be made by said Public Health Service and the health authorities cooperating, to remove or reduce the said menace; and

Whereas, it is pointed out that one of the most serious phases of the said menace is secret, ignorant, self-treatment of infected persons; and

Whereas, we feel that the druggists of this country in cooperation with the physicians, can materially aid in reducing the ignorant self-treatment of infected persons and by directing such persons toward intelligent treatment, hasten their cure and reduce the number of infected men entering the service of the United States; and

Whereas, the activity and propaganda necessary to this campaign will of itself serve as an educational medium and tend to prevent exposure to infection and

Whereas, the National Association of Retail Druggists feels that its efforts and influence can be of material service in this cause;

Now therefore be it resolved, that the National Association of Retail Druggists, in convention assembled, does now agree to support unequivocally the Government's program for the combating of venereal diseases and adopts the following pledge, earnestly urging its members individually to subscribe thereto;

PLEDGE

We, the undersigned druggists, appreciate the seriousness of venereal diseases, especially among the armed forces of the United States, as indicated by the reports of the Surgeon General of the United States Army, and we hereby pledge ourselves individually to cooperate with the United States Public Health Service and with all health authorities to do all that lies within our power as druggists to aid in reducing the venereal scourge among civilians, and specifically do we agree:

1. Not to prescribe or recommend any remedy for a venereal disease.

2. Not after this date to purchase a "proprietary remedy" for a venereal disease, and not to sell such "remedy" after Dec. 1, 1918.

3. To cause to be handed to every person asking for a remedy which we believe is to be used for a venereal disease without a physician's prescription, a card or other literature furnished us by the Surgeon General, directing such applicant to a reputable physician, to a board of health, or to an approved venereal clinic.

4. Not to refill prescriptions for the treatment of venereal diseases without the order of a physician.

It is understood the Government will require the physicians to sign the following pledge:

1. To keep accurate record of all venereal patients treated in accordance with State laws, and to report same to the proper health authorities required by the State, County or City.

2. To indicate where required on such individual record when the patient is discharged as cured and in such cases which fail to continue treatment to the point of cure, to report same to the Board of Health or competent authority.

3. To comply with the request of the Surgeon General, neither to compound or dispense remedial agents for venereal disease except in emergency conditions, and in such event to make complete notation of ingredients used and quantities of each on each occasion so dispensed.

4. Except in cases requiring special treatment to follow the method of treatment as laid down in the instructions and procedure outlined by the Surgeon General for cases of this character.

24. Whereas, many medical practitioners are not properly equipped to effectually treat venereal diseases, therefore be it

Resolved, that the N. A. R. D. in convention assembled, petition our Federal, State and Municipal Governments to establish venereal clinics in various easily accessible zones where proper modern treatment of said diseases may be assured.

Entertainment

A pleasing event of the convention was the speech made by by Curtis P. Gladding, of Hartford, Conn., who proposed Col. John W. Lowe, Dr. William C. Anderson and Wilhelm Bodemann as honorary members of the association for life without the payment of dues, their long and devoted services to the organization entitling them to this honor. Col. Lowe was the only one of the Old Guard able to be present, and he received the congratulations of his many friends.

The entertainment features included a "Get-Together Relaxation Party" under the auspices of the New Orleans Drug Club; a joint reception to the members of the N. A. R. D. and the W. O. N. A. R. D., in the famous "Cave" of the Hotel Grunewald; and a banquet tendered by the local wholesale drug houses. For the visiting ladies there were automobile rides to the famous parks of New Orleans, and along the shores of Lake Pontchartrain to the ancient Spanish Fort; a visit to the French market; a theater party at the Orpheum; a visit to the Isaac Delgado Museum of Art, and a Creole luncheon at the Spanish Custom House of Colonial Times, a structure now 160 years old.

OPPOSE AMENDING HARRISON ACT

W. O. N. A. R. D. in Annual Session Decides to Maintain Two Scholarships in Pharmacy for Deserving Girls and to Raise Membership Dues — Officers Elected

While the registered delegation was smaller than usual, owing to the length of the journey and the expense of the trip, nevertheless there was a representative attendance at the annual meeting of the Woman's Organization, N. A. R. D., held in conjunction with the annual meeting of the N. A. R. D. at the Hotel Grunewald, New Orleans, and the women spent every session to good purpose.

Among the important measures adopted by the association was one raising the annual dues of each member to $1 as a fee to the National treasury. It was also decided to maintain two scholarships for the education of worthy girls desiring to study pharmacy, and colleges are to be encouraged to establish, under suitable conditions, free scholarships especially designed for women in order to relieve the inevitable and increasing shortage of drug clerks.

The women took great interest in the proposed repeal of section 6 of the Harrison Narcotic Act, which they opposed, sending a telegram to Senator Simmons, and Representative Kitchin, chairmen of the Senate and House Finance Committees, in which it was stated that the effect of the proposed repeal of the section would be to bring about the denial to the poor and middle classes of the privilege of buying the many home remedies of medicinal virtue within reach of their limited means, thereby working untold hardships upon very large numbers of people. Further, it was declared, the repeal of the section at this time would be ill-advised when the people are struggling with the high cost of living, and unfortunate, in view of the great scarcity of physicians which necessitates that rich as well as poor and middle classes make use of the services of the drug stores even more now than during normal times.

The following officers were elected for the ensuing year: President, Mrs. J. J. Seiberz, Louisville, Ky.; 1st vice-president, Mrs. S. A. Eckstein, Milwaukee, Wis.; 2nd vice-president, Mrs. A. J. Pauley, St. Louis, Mo.; 3rd vice-president, Mrs. Oscar Draper, Wilmington, Del.; 4th vice-president, Mrs. Edward Ferger, Indianapolis, Ind.; 5th vice-president, Mrs. Eugene Selzer, Cleveland, Ohio; corresponding secretary, Mrs. L. O. Wallace, Auburn, N. Y.; financial secretary, Mrs. Nellie Florence Lee, Philadelphia, Pa.; treasurer, Mrs. John C. Otis, Cincinnati, Ohio; board of directors—Mrs. J. H. Riemenschneider, Chicago, Ill.; Mrs. J. F. Waterhouse, Boston, Mass.; Mrs. Louis Emanuel, Pittsburgh, Pa.; Mrs. A. J. Reiss, Rock Island, Ill.; Mrs. J. W. Stratton, Mobile, Ala.; Mrs. R. A. Clarkson, Springfield, Ill.; Mrs. William H. Farley, Asbury Park, N. J., and Mrs. Walter H. Cousins, Dallas, Texas.

An interesting development of the convention was the establishment of the New Orleans Chapter of the W. O. N. A. R. D., the following officers being elected: President, Mrs. Christian Schertz; 1st vice-president, Mrs. Louis Szabary; 2nd vice-president, Mrs. J. E. John; recording secretary, Miss Clara Racoby; corresponding secretary, Mrs. Chris Stumpf; treasurer, Mrs. D. Autry.

CONSERVATION MEASURES IN KENTUCKY

State Council of Defense Requests Druggists to Adopt Course Prescribed by Government

The druggists of the state of Kentucky have received a communication from the Commercial Economy Committee, State Council of Defense, requesting their cooperation in enforcing the Government conservation measures in retail stores, which are as follows:

1. Make only one delivery a day over each route.
2. Limit the privilege of returning merchandise to 3 days.
3. Curtail special deliveries in every way. (This does not apply to prescriptions and sick room requisites.)
4. Require a deposit on C. O. D. purchases.
5. Discontinue the custom of sending goods on approval.
6. Co-operative deliveries.

The request for one delivery a day on each route applies to all stores that maintain any form of delivery service, including dry goods, clothing, department stores, groceries, drugs, meats, etc.

The establishment of co-operative delivery systems is urged in every place where practical, as by this very means the greatest saving is to be accomplished, and thus make many more men available for war work, where they are today needed.

Every merchant is requested to put this program into effect in his store at the earliest possible moment.

A pledge card embodying the policies stated above is enclosed to be filled out and returned to the chairman, upon receipt of which an official hanger is sent for the window, showing the buying public that the store has made this saving of man power at the request of the Government.

SHORTAGE OF RADIUM PREDICTED.

The United States is facing a possible shortage of radium, and it has been predicted by Dr. Richard B. Moore of the Bureau of Mines that the commercial supply of the metal will not last more than six or seven years. Radium is largely being used on the faces of watches and clocks and for similar purposes. Physicians and surgeons are not purchasing enough radium to make the industry a financial success. Nine instruments used on airplanes have dials made luminous with radium paint; it is employed in the same manner for compasses and gun sights. The efficiency of night firing with machine guns and artillery is greatly facilitated.

While it is difficult to estimate the exact amount of radium now in existence, probably it is somewhere around three ounces of radium element. Considerable more than half the amount comes from Colorado and Utah carnotite ores, most of the deposits being owned by ore operating radium companies.

One method of preventing a future shortage is to provide a substitute. Mesothorium is an excellent substitute in many ways. Mesothorium can be obtained as a by-product in the treatment of monazite sand for the manufacture of thorium nitrate used in incandescent mantles. During the last year the United States Bureau of Mines has been experimenting along these lines and it is hoped that before long Mesothorium can be substituted for some of the radium now used in luminous products.

The price of quinine in tablet form is "controlled" in Greece so that the retailer is insured a profit of 0.5 drach. per fifty tablets of quinine hydrochloride and 0.35 drach. on the same quantity of quinine-bisulphate tablets.

Obituaries

OCTAVE A. A. ROUILLON

Octave A. A. Rouillon, one of the oldest pharmacists in New York State, died on August 31, at his home, 443 Clermont Avenue, Brooklyn, in his 85th year. His pharmacy at Gates Avenue and Fulton Street, from which he retired in 1915, was one of the landmarks of Brooklyn, and had been in existence for sixty years. Mr. Rouillon was born at Bazancais, France, and educated at Bloit Seminary. For eight years he was engaged in the drug business in Paris. He then emigrated to the United States and immediately engaged in the practice of his profession. On the occasion of reaching his eightieth birthday in 1915, he was the recipient of many congratulatory letters from distinguished pharmacists in various parts of the country. He was a life member of the Kings County Pharmaceutical Society, and thirty-five years ago was a frequent contributor of scientific papers before the organization. He is survived by a widow and two sons.

JOHN A. DUNN

John A. Dunn, long connected with E. R. Squibb & Sons, Brooklyn, N. Y., and a well-known member of the American Pharmaceutical Association, having joined the organization in 1867, and being a frequent attendant of its meetings, died on August 31, at his home in Flatbush. He was 78 years of age. He was born in St. Louis, and when a boy he accompanied Dr. William F. Edgar, a U. S. Army surgeon, on a trip to the Pacific Coast, along the thirty-fifth parallel, passing through country that had never been set foot on before by white men The purpose of their trip was to establish an army post at Albuquerque, N. M. During the Civil War he served as a hospital steward in the Army. He settled in Brooklyn more than fifty years ago and early became attached to the late Dr. E. R. Squibb, with whom he became identified, continuing with the company until his death. The funeral was held on September 2, with requiem mass at the Church of the Holy Innocents. His widow and a daughter, Mrs. Joseph O. Reither, of Lynbrook, L. I. survive.

I. GILES LEWIS DEAD

I. Giles Lewis, secretary of Robert Stevenson & Co., wholesale druggists of Chicago, died at his home in that city on Sept. 19. He was 71 years of age. Mr. Lewis was born at Pharsalia, N. Y, and attended the University of Michigan from 1864 to 1867, holding a certificate of proficiency for chemical and pharmaceutical work in that institution the honorary degree of Pharm. M. being conferred upon him in 1891. He became identified with the wholesale drug trade of Chicago many years ago, and for the past thirty-seven years was manager of the sundries department and secretary of Robert Stevenson & Co. The body was taken to Ann Arbor, Mich., for burial.

WAR WORK OF THE CHEMIST

According to a member of the Chemists Club of Paris, out of 2,500 chemists in France 1,400 have been mobilized. Of these 1,400, 800 were subsequently employed in technical work, but the 600 others were sent to their regiments, meaning a grave loss in the personnel of the Government munition plants. The smallness of this number of French chemists may be judged from the fact that Germany has 30,000 chemists employed in the service of the Government and great industries. This army, the French authority points out, has enabled Germany to carry on her gas warfare and the manufacture of explosives. The progress of this mode of attack up to a certain point has undoubtedly been due to the temporary superiority that Germany has enjoyed in the number of her chemists.

The same French authority says in the "New York Sun", the United States will be called upon for additional efforts in this direction. We have 16,000 chemists, about half the number of German chemists, and this figure shows that a country of such magnitude is far from being well equipped with these workers. Chemists are required for the munition plants, textile and paper mills, and chemical works engaged in making sulphuric and nitric acid.

In the making of explosives alone Germany makes use of over 120,000 tons of sulphuric acid a month. When this supply fails, if only for a brief time, she will be compelled to sue for peace. For sulphuric acid is essential in making not only gun-cotton and smokeless powders but all the high bursting explosives used for torpedoes and shells. But it is not so much a great source of military power as a means of supporting that power with materials almost as essential as powder—with nitric acid, fertilizers, foodstuffs, dyes, and innumerable chemicals and articles of commerce. In the manufacture of these, two things are chiefly necessary, sulphur in some form and the skilled chemists to transform it into sulphuric acid and industrial materials.

PROGRAM OF N. W. D. A. CONVENTION

The Committee on Arrangements and Entertainment of the National Wholesale Druggists Association announced recently the program for the annual convention to be held at the Hotel Astor, New York, on Oct. 7 to 11. The president's reception will be held at 9 p.m. on Monday, Oct. 7. The business sessions will be held at 10 a. m. and 2 p. m. on Monday, Tuesday, Wednesday, and Thursday. The banquet will be held on Thursday evening.

Friday, Oct. 11, will be taken up with an excursion up the Hudson and a session at Bear Mountain Inn. West Point will be visited in the afternoon.

Mrs. Flach of the Boyd & Flach Drug Co., Tombstone, Arizona, has sold out her interest to W. T. Boyd. Her name will be dropped from the firm's sign and the firm will be known as the Boyd Drug Store.

Schools and Colleges

MASSACHUSETTS COLLEGE BUILDING DELAYED

Pharmacy Class May be Held in Only Partly Completed Structure

Considerable doubt is felt that the new building of the Massachusetts College of Pharmacy in Boston will be finished in time for the opening of the academic year and it is likely that portions of the building will be occupied before the whole is finished. Owing to the present shortage of labor and the delay in transportation of materials work on the structure has been retarded. However, the general construction work was finished before the shortage of help became so acute. Much of the fixed equipment has been received and is being installed. Owing to the uncertainty of the times, it will not be known for some time when the dedicatory exercises will be held.

The course in commercial pharmacy at this college is to be changed and developed with the new academic year and senior students will be required to complete and pass in this subject before they can graduate. Postgraduate candidates for the degree of pharmaceutical chemist will also be required to take this course. Prof. Elie H. LaPierre, will have charge of the course and will be assisted by specialists.

Much regret is expressed at the resignation of Assistant Professor Hugh C. Muldoon, who left the college to go to the Albany College of Pharmacy where he will be assistant professor in chemistry. He has been instructor in analytical and organic chemistry and in 1913 was given charge of the newly introduced course in pharmaceutical Latin, in addition to his other work. In 1917 he was advanced to assistant professor of chemistry and Latin. He is the author of a text book, published in 1916 which has been adopted in many other colleges of pharmacy.

FAIRCHILD SCHOLARSHIP REQUIREMENTS

E. G. Eberle, chairman of the A. Ph. A. Fairchild Scholarship Committee, has sent out a circular letter stating that the action taken at the recent Indianapolis meeting relative to the award of the scholarship for this year is based on a recommendation of President R. A. Lyman of the American Conference of Pharmaceutical Faculties, which recommendation was referred to a committee consisting of H. C. Christensen, chairman, Chicago, Prof. J. W. Sturmer, Philadelphia, Dr. Geo. C. Diekman, New York, and Dr. R. A. Lyman, Lincoln, Neb., with instructions to formulate a definite plan. The Committee decided that in making the award:

The ability of the candidate to perform research work is given a value of 50 credit units; the pharmaceutical scholastic record a value of 40 credit units; and the non-pharmaceutical scholastic record (above high school grade) a value of 10 credit units.

Further, that the candidate's ability to perform research work be determined upon evidence of research work previously accomplished, and that such evidence may take the form of a thesis presented at a college of pharmacy, or a paper covering research work carried out at a college, but in the latter case it should be accompanied by a certification from the dean that the paper represents the student's individual work. A published paper covering research work performed by the candidate subsequent to his graduation may also be accepted as evidence—at the discretion of the Committee.

The Committee in its report explained that the recommendations did not necessarily represent the views of the members of the committee on the larger problem of awarding the Scholarship, but that the recommendations outlined a practical plan decided upon the basis laid down at the Indianapolis meeting. Schools or colleges of the American Conference of Pharmaceutical Faculties having a candidate to present for the Fairchild Scholarship should therefore send his credentials, etc., to Chairman H. C. Christensen, 4149 Vincennes St., Chicago, Ill., by Oct. 1, in order that the award may be made soon thereafter.

The Chairman of the Fairchild Scholarship Committee also requests that the schools and colleges give the Fairchild scholarship plan consideration, and those interested are requested to present their views in writing to Secretary Theodore J. Bradley, of the American Conference of Pharmaceutical Faculties, care of Massachusetts College of Pharmacy, Boston, Mass., prior to Dec. 1, 1918, so that their expressions may be laid before the incoming Fairchild Scholarship Committee and thus aid it in formulating plans of award for next year.

UNIVERSITY OF ILLINOIS

Announcement is made that the War Department has established in the University of Illinois a unit of the Students' Army Training Corps and that male students, eighteen years of age or over, who are physically fit for military service will be voluntarily inducted into this unit. From the time when the students are actually inducted into the service, the Government will undertake to provide uniforms, and to pay the tuition for members of the unit. They will also receive the pay of privates ($30.00 a month). Room and board will be provided in barracks where all members of this unit will be expected to reside and to be subject to military discipline.

To be eligible for membership in the S. A. T. C. the student must be a regularly matriculated student in the University and therefore a graduate of an accredited high school and must be 18 years of age or over. It is expected that the S. A. T. C. unit will be organized in the Chicago Department, including the School of Pharmacy, about October first or shortly thereafter.

These student-soldiers will take military drill eleven hours a week, two hours a week in military tactics and three hours a week in a War Aims course.

Col. Robert I. Rees, Chairman of the Committee on Education and Special Training of the General Staff, who is in charge of the organization of the Students' Army Training Corps, has issued the following statement:

"All young men who were planning to go to school this fall should carry out their plans and do so. Each should go to the college of his choice, matriculate, and enter as a regular student. He will, of course, also register with his local board on the registration day set by the President [September 12]. As soon as possible after registration day, probably on or about October first, opportunity will be given for all the regularly enrolled students to be inducted into the Students' Army Training Corps at the schools where they are in attendance. Thus the corps will be organized by voluntary induction under the Selective Service Act, instead of by enlistment as previously contemplated.

"The student, by voluntary induction, becomes a soldier in the United States Army, uniformed, subject to military discipline, and with the pay of a private [$30 a month]. They will simultaneously be placed on full active duty, and contracts will be made as soon as possible with the colleges for the housing, subsistence, and instruction of the student soldiers.

"Officers, uniforms, rifles, and such other equipment as may be available will be furnished by the War Department, as previously announced.

"The student-soldiers will be given military instruction under officers of the Army and will be kept under observation and test to determine their qualifications as officer-candidates, and technical experts such as engineers, chemists, and doctors. After a certain period, the men will be selected according to their performance, and assigned to military duty in one of the following ways:

"(a) He may be transferred to a central officers' training camp.

"(b) He may be transferred to a non-commissioned officers' training school.

"(c) He may be assigned to the school where he is enrolled for further intensive work in a specified line for a limited specified time.

"(d) He may be assigned to the vocational training section of the Corps for technician training of military value.

"(e) He may be transferred to a cantonment for duty with troops as a private.

"Similar sorting and reassignment of the men will be made at periodical intervals, as the requirements of the service demand. It cannot be now definitely stated how long a particular student will remain at college. This will depend on the requirements of the mobilization. In order to keep the unit at adequate strength, men will be admitted from secondary schools or transferred from Depot Brigades as the need may require.

"Students will ordinarily not be permitted to remain on duty in the college units after the majority of their fellow citizens of like age have been called to military service at camp. Exception to this rule will be made, as the needs of the service require it, in the case of technical and scientific students, who will be assigned for longer periods for intensive study in specialized fields."

HIGHLAND PARK

At the recent commencement exercises of Des Moines College, degrees were conferred upon the following graduates of the Highland Park College of Pharmacy:

Graduate in Pharmacy; Frederick H. Beatty, Mascoutah, Ill.; Stanley R. Doane, Des Moines; William B. Dresler, Silver City; Albert G. Flindt, Arriba, Colo.; Oscar G. Fladt, Burlington; Ralph W. Lersch, Burlington; John A. Mease, Jr., Vernal, Utah; Marion S. Moore, St. Anthony, Idaho; Edwin H. Schmitz, Des Moines; Walter Severt, Fremont; Harry B. Shaffer, Greenfield; Clifford F. Taplin, Milroy, Minn.

Pharmaceutical Chemist; Frederick H. Beatty, Mascoutah, Ill.; Paul Gschwender, Martins Ferry, O.; Marion S. Moore, St. Anthony, Idaho; Clifford F. Taplin, Milroy, Minn.; Glenn W. Chamberlain, Des Moines.

The service flag of the college of pharmacy shows that seventy-six former students have reported as being in military service.

EFFECT OF RAINEY NARCOTIC BILL

Frank T. Stone, chairman of the Legislative Committee of the N. A. R. D., recently learned by accident that a bill had been introduced in Congress by Representative Henry T. Rainey of Illinois, H. R. 12787, entitled "A Narcotic Bill" amending the Harrison law in several respects and concluding with a sentence repealing Section 6 which contains most of the exemptions. This bill had been incorporated in the pending revenue bill without notice to the drug trade whose active co-operation had been solicited by the Treasury Department, the State Department and Representative Harrison before its enactment into law.

Upon investigating the matter, the best that representatives of the drug trade could get were informal conferences with Mr. Rainey and Representative J. Hampton Moore of Pennsylvania—two members of the sub-committee which had favorably reported the Rainey bill to the full committee before those of the trade were given any notice of the existence of such a bill. The informal conferences were attended by H. B. Thompson, general counsel for the Proprietary Association, S. L. Hilton, a prominent member of the American Pharmaceutical Association, and by several representatives of the N. A. R. D. Their chief cause of contention lies in the fact that the Rainey bill was introduced into the House without letting the Committee have the benefit of the practical knowledge and experience of those in the trade and profession best qualified to give advice to the lawmakers as to the effect of the bill on public welfare.

At the time that the Harrison bill was reported to the House, Mr. Rainey subscribed to the majority report of the Ways and Means Committee stating that the purpose of Section 6 was to exempt from the operation of the law such preparations as contained a narcotic in such small quantity as to make it impossible for them to become habit-forming. He now defends his reversal of position and his new stand on the ground that evidence has come to his attention showing gross abuses in the sale of preparations containing narcotics.

FOURTH LOAN CALLED VICTORY BONDS

Announcement of the Fourth Liberty Loan which was offered September 28, comes just as the American army in France is winning new laurels which has suggested the name of Victory Bonds for this new issue. The Liberty Loan Committee has decided on a three weeks' selling campaign. If this district's loan totals can be over-subscribed in less time, there would be a saving in effort and expense; and this in an era when conservation of effort and expense is worth while.

There is every reason to believe that the district will over-subscribe the fourth loan, as it has all previous issues. Then why not do it at once, conserve our time and effort and establish a record in patriotic effort that will inspire the rest of the nation?

NAME NEW PLATINUM ADMINISTRATOR

Raymond T. Baker, Director of the Mint, has been appointed government platinum administrator, and has started the collection of the precious metal in every part of the country. Several months ago the government issued a commandeering order, putting all stocks of platinum at the disposal of the government at a purchase price of $105 an ounce.

All national banks acting as government depositories, mints, assay offices and sub-treasuries have been designated by Administrator Baker to act as collecting agencies. The metal then will be forwarded to the New York Assay Office for weighing and testing, and checks will be mailed from that office.

Boards of Pharmacy

KENTUCKY

At the meeting of the Kentucky Board of Pharmacy held at Dawson Springs, July 9 and 10, a class of fifteen was examined. The following passed as registered pharmacists: Chas. H. Arnold, Georgetown; Jesse C. Gordon, Cadiz; Arthur F. Quinn, Morganfield; Fred H. Schultz, St. Bernard, Ohio; Lowell L. Segraves, Sturgis; Jos. D. Wheeldon, South Carrollton.

The following passed as assistants: Geo. F. Cornelius, Newport; Miss Helen C. Lingang, Owensboro; Benj. Pookman, Louisville; Ollie Wallace, Dawson Springs; Albert F. Mueller, Cincinnati, Ohio; William H. Ballard, Jr., Lexington; Richard B. Dillon, Breeding; Chas. B. Hurt, Beaver Dam.

The next meeting will be held at Pineville, Oct. 8 and 9.

MINNESOTA

Eighty applicants took the July examinations for pharmacists and assistant pharmacists conducted at the University of Minnesota under the direction of the State Board of Pharmacy of Minnesota. The successful applicants were:

Registered pharmacists: O. A. Collitan, St. Paul; A. D. Kennedy, St. Paul; William H. Ebeltoft, Lake Park; Frances Greenwalt, Lake Crystal; James A. Ilk, Winona; Benjamin Karpman, Minneapolis; J. F. Mikiska, Duluth; George C. Paul, St. Paul; E. D. Peterson, Minneapolis; C. J. Sletner, St. Paul; Louis Stein, Hibbing.

Assistant pharmacists: William L. Baker, Princeton; Martha Brown, Winona; E. A. Enders, Winnebago; Morris Giller, Minneapolis; H. S. Gross, Watertown, S. D.; B. H. Horlitz, Red Wing; Selma Larson, Wanamingo; E. J. McMullen, Breckenridge; J. B. Mayo, Minneapolis; Charles W. Mike, Tower; Anton Stucky, Jr., Waseca.

WISCONSIN

The Wisconsin State Board of Pharmacy, at its quarterly meeting in the State Capitol, Madison, on July 17, 18 and 19, granted certificates to fifty-three applicants, including eight women. This is the largest number of women that has ever been licensed at any examination in Wisconsin. Members of the board who were present and conducted examinations were Otto J. S. Boberg, Eau Claire, chairman; Edward Williams, Madison, secretary; B. J. Kremer, Fond du Lac, and H. G. Ruenzel, Milwaukee. The next regular meeting of the board and examinations for certificates will be held at Madison on Oct. 16, 17 and 18.

Registered pharmacist certificates were granted as follows: John Olk, Antigo; Walter G. Anderson, Marshfield; Gustave J. Noel, Madison; Floyd S. Rudocker, West Alis; Fred A. Quade, Turtle Lake; Harlan Groffman, Manitowoc; Charles Henninger, Milwaukee; Allyn B. Crisler, Rice Lake; Vera Hinz, Milwaukee; Howard H. Baker, Madison; John W. Jakob, Milwaukee; Cyril F. Lohr, Hartford; George K. Mills, Rice Lake; Franklin J. Bacon, New London; Carlton W. Gaffron, Milwaukee; Nevada F. McCarthy, Janesville; Frank H. Substyk, Milwaukee; Ernest G. Kuenzi, Madison; Aloysius F. Wiesend, Milwaukee; John H. Kitzinger, Seymour; Sister M. Schaller, Fond du Lac; Jonas L. LaCrosse, Madison; Norris A. Hanson, LaCrosse; Claude E. Rupp, Madison; Sophie Kremers, Milwaukee; Michael F. Prasch, Milwaukee; Francis P. Naffz, Madison.

Those receiving certificates for assistant pharmacist are: Irene E. Staples, Osceola; Lawrence Hoffman, Gresham; Matthew F. Baldwin, Bloomington; Joe A. Gitzen, Milwaukee; Charlotte R. Rath, Almond; Wm. H. Lewis, Madison; George W. Steed, Janesville; Walter F. Knoeppel, Milwaukee; Morris Mirchonik, Milwaukee; Clarence Nelson, Marinette; Justin F. Iken, Kenosha; Felicia Knofczynska, Milwaukee; Lida L. Winkelblech, Madison; Harry J. Schultz, Milwaukee; Ralph L. Van de Kamp, Milwaukee; Frank M. Fischer, Milwaukee; R. Leslie Mealy, Burlington; Stanley P. Filipiak, Milwaukee; Edward A. Wobig, Janesville; George C. Werner, Kenosha; Raymond A. Karasinski, Milwaukee; Effie L. Shankey, Eau Claire; Erwin J. Franzel, Milwaukee; John F. Chelminiak, Milwaukee; Ralph W. Coffey, Ashland; Louis J. Best, Milwaukee; Oliver P. Herr, Madison; Alfred H. Maack, Clintonville.

PROHIBITION WINS VICTORY IN U. S. SENATE

National prohibition moved a considerable step forward on August 29, when, without a record vote being taken or requested, the Senate adopted the leaders' compromise on "bone dry" prohibition, to go into effect July 1, 1919, and to continue during the war and until the American troops are brought home and demobilized.

The compromise, an amendment by Senator Sheppard of Texas, to the pending agricultural extension bill which provides for an $11,000,000 appropriation increase, is expected to remain in the measure under the harmony agreement of "wet" and "dry" factions.

Under the terms as adopted, the sale of all alcoholic liquors, including beer and wine, as beverages will be prohibited after June 30, 1919, except for export. After May 1, 1919, the manufacture of beer and wine will be prohibited. The President is given authority at any time after the passage of the act to establish prohibited zones around coal mines, shipbuilding plants, munition factories and other places engaged in the manufacture of war materials.

Senator Phelan of California made a vigorous fight for a longer lease of life for the wine and beer industries, but all efforts to amend the proposition, either by changing the date when it should become effective as to beer and wine, or to change the date when general prohibition should become effective, were voted down.

THE SALE OF PATENT MEDICINES

Counsel for E. Fougera & Co., importers of pharmaceutical specialities, states that he knows of no statute, either of State or Federal enactment, that prohibits the sale of a remedy which, among other uses, may be used for the treatment of a particular disease provided that the remedy is called for under its trade name. He also would seriously question the legality of any statute placing a restriction upon anything which has been considered as legitimate merchandise by Federal and State decision. All of which is by way of answer to inquiries arising from the campaign of publicity against self treatment for disease and the attempts which have been made to require formula disclosure as a prerequisite of the sale of patent medicines.

Credit and Commercial Case Decisions

By GEORGE H. MURDOCH, New York, N. Y.

Damages for Infringement—Though an infringer made profits on some sales and sustained losses on others, the patentee was entitled to recover the profits made, without deducting the losses.—248 F. (U. S.) 125.

Alien Enemy's Right to Sue—A resident subject of a country at war against the United States is entitled to maintain an action in our courts.—169 N. Y. S. 944.

Repudiation of Agent's Authority—A principal cannot avail himself of the benefits of an agent's act and at the same time repudiate his authority.—103 A. (Pa.) 510.

Negligence—Negligence is an unintentional breach of a legal duty causing damage reasonably foreseeable, without which breach the damage would not have occurred.—170 N. Y. S. 178.

"Open Account"—An "open account" within Code 1907, § 4838, stating limitations on open accounts, is one in which some term of the contract is left open and undetermined by the parties.—78 So. (Ala.) 464.

Injury as Result of Forgery—To constitute the crime of forgery it is not necessary that any one be actually defrauded, but it is enough if an alleged forged check is of such a character that a person accepting it as true and genuine might suffer loss.—171 P. (Cal.) 975.

Joint Adventures—A party to a joint adventure, which, after being conducted for a time, is terminated, is entitled to an accounting; there being profits which have not been divided, and the parties not having agreed on the amount thereof.—169 N. Y. S. 887.

Injuries "Arising Out of Employment"—Where one employed as a bookkeeper and clerk crossed a public street to mail a letter written for his employer according to custom and was injured by an automobile driven by a third party, the injury arose out of the employment.—171 P. (Cal.) 1088.

Skill Required of Surgeons—In a surgeon's treatment there is exacted that degree of knowledge, skill, and care ordinarily had and exercised by the average of the profession in the same or similar localities, having regard to the improvements and advances in their profession at the time.—167 N. W. (Iowa) 182.

Diligence Necessary in Cases of Fraud—One who seeks to avoid a contract which he has been induced to enter into by fraudulent representations of another touching the subject-matter of the contract must proceed with reasonable promptitude upon discovering the fraud, or the right to rescind will be waived.—171 P. (Wash.) 1013.

Easements of Light and Air—Easements appurtenant of light, air, and access to property abutting upon a street or open space are inseparable from the dominant estate, and upon its conveyance pass to the grantee, notwithstanding the grantor's attempted reservation thereof, or of any rights of action for a trespass.—169 N. Y. S. 903.

Transfer of Bill of Lading—When a bill of lading in favor of the drawer is by him indorsed to a bank with draft attached, and the draft paid to the drawer by the bank, such transaction has the effect to transfer the legal title of the property called for in the bill of lading to the bank.—171 P. (Okla.) 1122.

Insurer's Option to Replace Property Destroyed—Where a fire insurer exercises its option to replace the property destroyed, the contract of insurance from that time becomes converted into a new and independent undertaking on the part of the insurer to replace the property, restoring it to its former condition.—248 F. (U. S.) 452.

Contemporaneous Agreement Contradicting Writing—In an action on a note a defense that there was a contemporaneous agreement that the maker would not be required to pay according to its terms, and that time to pay the principal would be extended on payment of interest, cannot be allowed, because contradicting the written promise.—95 S. E. (N. C.) 555.

Nondelivery of Telegram—Where plaintiff's representative wired him to come to another town, where he could buy a stock of goods for less than its value, he was only entitled to nominal damages for nondelivery of the telegram; the loss of the opportunity to make a contract being too speculative to be recoverable.—202 S. W. (Ark.) 232.

Memorandum to Assist Witness—A witness may testify from a memorandum where he has no independent recollection of the facts even after seeing it, if he recollects having seen it before and remembers that at the time he saw it he knew the contents to be true. Want of independent recollection, if obvious, need not be directly proved.—167 N. W. (Minn.) 301.

Dissolution of Partnership—Where one of two members of a partnership sells his interest to the sole copartner, the firm is thereby dissolved, and, though partnership creditors cannot be deprived of their right to proceed against either member of the previous copartnership, they proceed against them individually and not as copartners.—248 F. (U. S.) 565.

Sunday Closing Law—Druggists—It is a matter of common knowledge that drug stores are not limited in their stock in trade to drugs, but that they carry tobacco, cigars, candies, soaps, toilet articles, and the like, as well as medicines and drugs, and that, in the absence of local laws, they are kept open on Sunday to sell the articles they carry.—78 So. (Ala.) 454.

Property Covered by Fire Policy—A policy covering property "all while contained in and on the brick building and extensions thereto" at a certain address did not cover property in a one-story wooden structure in the rear of the lot, forty feet from the brick building, and not physically connected therewith; such wooden structure not being an "extension" of the brick building.—169 N. Y. S. 908.

Refilling Labeled Bottles—In an action under General Business Law (Consol. Laws, c. 20) § 367, to recover a penalty for selling from a refilled bottle stamped with a trade-mark, evidence of three witnesses that they had marked a bottle, and that its contents was subsequently twice increased, and drinks therefrom sold by defendant to them, held sufficient to support recovery.—169 N. Y. S. 997.

Check as False Token—The giving of check for goods to be paid for upon delivery, without any explanation to the contrary was of itself a representation, symbol, or token that defendant had money on deposit in such bank, and if false and given with intent to deceive the seller and induce him to part with the goods, which was accomplished, the defendant was guilty of obtaining money under false pretenses—78 So. (Ala.) 321.

Women in Pharmacy

CONDUCTED BY EMMA GARY WALLACE

MISS MARY CONNOLLY

Miss Mary Connolly, Ph.G., daughter of F. W. Connolly, proprietor of the well-known Connolly Drug Store, located in the Dorchester section of Boston, Mass., is a natural leader, as the record of her work will show in the part she took in organizing that most promising young society, the Lambda Kappa Sigma.

Miss Mary Connelly

This movement started in 1915 at the Massachusetts College of Pharmacy, having for its object a closer union of college of pharmacy graduates all over the country and national organization with local chapters in the different colleges, which will include both the student body of each and its alumni.

Miss Connolly was born in Dorchester in the home the family still occupies. She graduated from the Benjamin Cushing Primary, the Mather Grammar, and the Dorchester High Schools, and entered the Massachusetts College of Pharmacy in 1912, taking a partial course and studying music under Miss Emma Hosford of Huntington Chambers. She kept up her music throughout her three years of college work, and graduated from the M. C. P. in 1916. During her career she helped her father in the store whenever possible, being registered by the Board of Pharmacy as an assistant in 1914, and securing full registration in 1916. At the present time, she is her father's most valuable assistant, acting as store manager. She has proved herself a careful and competent buyer, a good sales-maker, and is very popular with all classes—young and old. In the crisis through which pharmacy is passing as regards trained workers, Mr. Connolly is to be congratulated in that he has been far-seeing enough to interest his daughter in his own line of work.

The engagement of Miss Mary Connolly, who is a graduate of the Massachusetts C. P. and a registered pharmacist, to Mr. Urban S. Livingston of the Chemical Service Station, N. A., has just been announced. Miss Connolly's father is one of the active members of the B. A. R. D. and her mother a devoted worker in the W. O. B. A. R. D.

St. Louis Chapter No. 8 elected to serve as officers for the coming year: President, Mrs. A. Pauley; vice-president, Mrs. A. Ludwig; treasurer, Mrs. Haverman; secretary, Mrs. W. Ittner; corresponding secretary, Mrs. Thebus. Mrs. Hoenny, the retiring president was presented on behalf of the Chapter by Mrs. Fricke, with a handsome brooch.

The new pharmacist of the Catholic Sanitarium at Colorado Springs is Sister Mary Emanuel Vogelpohl, who has been in charge for some time of the pharmacy department of the Good Samaritan Hospital, Cincinnati.

WOMEN AS PHARMACISTS

H. M. Faser, dean of the College of Pharmacy, University of Mississippi, in a communication to one of the newspapers of the state writes interestingly of the peculiar fitness of women for the practice of pharmacy, and of the opportunities which have been opened for members of the sex. His letter follows:

"Experience has shown that women possess a peculiar fitness for the study and pursuit of Pharmacy, and while there are a great many more women practicing the profession to-day than a few years ago, still the supply for them is far short of the demand.

"Pharmacy has contributed generously from its ranks to the war, and the men are constantly being drafted into service, until at the present time many stores are far short of competent pharmacists. If the present war continues women will be compelled to take the places of men in the various pursuits of life, and I do not know of any profession that offers more opportunities to women than that of pharmacy. I wish to give below a few extracts taken from articles written by druggists who have employed women pharmacists.

"The demand for skilled women pharmacists is bound to increase. In no field have they proven more successful than in Pharmacy, where they have steady occupation, pleasant employment, and excellent remuneration and in no profession is there greater opportunity for service and advancement.

"A woman finds in pharmacy a great opportunity to minister to the needs of women and children. She is patient with old and young and sympathizes with those who confide in her.

"The natural accuracy and manual dexterity of a woman are great aids to her at the prescription counter, where she works with care and thought, although with nimble fingers.

"In a store with women among its clerks there is not the tendency, as sometimes evidenced in other stores, to make it a tobacco shop, cloudy with smoke and frequented by loafing men "swapping" stories. Such a store caters to a small class, but it is no magnet to the general public. Moreover, nowadays women form the majority of the buying public, and they like to make their purchases in light, clean, tidy, stores, and preferably where some of the clerks are women.

"A woman clerk is apt to be successful in selling toilet articles, for she knows quite a lot about such goods to begin with and quickly learns much more. Then women customers usually prefer to buy toilet articles and rubber goods from a woman."

AROUND THE CIRCUIT

The colleges of pharmacy will welcome many women students this fall, for every woman who undertakes training in this line will release a man for actual government service. Many are doing practical work behind the counter gaining their experience and being self-supporting at the same time. Those who cannot arrange to enter a regular college of pharmacy, should not overlook the opportunity to study under reliable, efficient specialists by means of a correspondence course in pharmacy, pursued at one's convenience. Many have employed such means and become well trained by so doing.

Sympathy is extended to the family of the late Mrs. Edward S. Bernard of Chicago Chapter. She was one of the early and untiring workers in the organization, being especially active in philanthropic and charitable work. Her death is keenly felt by all of her associates. She had been ill for several months with sclerosis of the arteries. Burial took place at her old home in Rock Island, Ill.

Sympathy is extended to Mrs. Louis Lehman of Chicago Chapter whose son, Private Kerlin L. Lehman, is listed as "killed in action." He was one of the youngest of the men in the Marines, being only seventeen at the time he enlisted. His father, the late Louis Lehman, was one of Chicago's veteran druggists.

Mrs. Charles Walgreen recently entertained the members of the Chicago Chapter at a knitting party at her home. Mrs. Riemenschneider, the chairman, was present, and there was a splendid showing of war work finished.

The July 31st meeting of the Cincinnati Chapter was held at the Zoological Gardens. Mrs. Wagner, the president, presided and much business was accomplished, further plans being laid for Red Cross work and entertainment activities.

Mrs. Wagner entertained the Board of Control, and as part of her refreshments served "Victory Cookies," which were so delicious that a clamor arose for the recipe. Mrs. Wagner graciously would have given the recipe, but one of the members, Mrs. Cramer, had a sudden business hunch and proposed that the recipe be sold for ten cents per person, and no sales be made unless everybody bought. The result was that a goodly sum was netted and of course the Cincinnati W. O. ladies are all eating Victory Cookies.

Mrs. Wagner opened her home at 3651 Bevis Avenue, Evanston, Cincinnati, Monday evening, August 12th, for a Chapter lawn fete, the proceeds going into the treasury.

Louisville Chapter, No. 11, has undertaken to make the Service Flag for the Louisville College of Pharmacy The flag will contain seventy-five stars which number will be increased from time to time. The suggestion came from Mrs. Oscar Dilly, wife of the Dean of the college.

Mrs. Peter Schlosser, chairman of the Educational Committee, has procured a live wire speaker for the Chapter for each month's meeting. The latest one to come with her message from the outside was Miss Frances Ingram who has been laboring in the "Neighborhood House" in the least desirable part of Louisville. She told of her work and how those whom she addressed could co-operate and assist.

The August meeting of Rock Island Chapter, No. 15, was held at the residence of Mrs. H. E. Rowe. There was a goodly attendance. The members enjoyed a Red Cross hour and then a period of games and a social refreshment half hour together.

Miss Reita Jackson has the proud honor to be the medal winner from the Tulane University, Louisiana School of Pharmacy. Miss Jackson won the best general average for her work during the year 1917-1918.

Miss Helen C. Lingang of Owensboro, Ky., has successfully passed the State Board of Pharmacy as a fully qualified pharmacist.

Mrs. Edward Ferger, president of the Indianapolis Chapter, No. 20, has been unfortunate enough to fall and break her arm, while attending an evening entertainment of the Indianapolis Druggists' Dancing Club.

The officers for the ensuing year for the Ladies Auxiliary of the California Pharmaceutical Association of San Diego, Cal., are: President, Mrs. J. G. Landis; vice-president, Mrs. E. Mayer; secretary, Mrs. C. E. Ferris; treasurer, Mrs. A. A. Wright.

The ladies of Oakland, Cal., enjoy a very unique organization which they call Witch Hazel Camp No. 2. The officers are queens, fairies, spirits, and rare perfumes. The organization takes in the ladies of the Alameda County Ladies Auxiliary of the California Ph. A. Its officers are as follows: Queen Asafetida, Mrs. L. Wagner; Slippery Elm Fairy, Mrs. Oscar W. McCracken; Fairy of the Woods, Mrs. W. A. Wishert; Fairy of the Mountains, Spirit of Camphor, Mrs. Featherstone; Fairy of the Flowers, Belladonna, Mrs. Carson Angel; Fairy of the Stream, Rosewater, Miss Fayetta Phillip.

Mrs. A. W. Pauley, just elected second vice-president of the Women's Organization, has been ill, necessitating a period of treatment in the Baptist Hospital of St. Louis. She is now convalescent.

Mrs. Nellie Winter, secretary of Cleveland Chapter No. 21, reports a most enthusiastic meeting which came as a climax to the Chapter's first year of work. Over fifty of the members met at the Hollenden for luncheon. Immediately following that the president, Mrs. Selzer, called the annual meeting to order. The treasurer, Mrs. Hellwig, reported that the Chapter had $355 to its credit in the bank. The members voted to have a picnic with games and prizes for young and old.

After adjournment, the members assembled for a "get acquainted" card party under the direction of Mrs. Heckler. The prizes were both beautiful and practical.

Among the delegates and alternates appointed to attend the W. O. N. A. R. D. Convention in New Orleans were the following: Chicago Chapter—Delegates: Mrs. J. P. Crowley, Mrs. T. Golden, Mrs. George Hoening, Mrs. B. O. E. Hoelzer, Mrs. Wm. Krizon, Mrs. I. M. Light, Mrs. Otto Mentz, Mrs. J. Meyer, Mrs. John Weireter. Alternates: Mrs. A. L. Coppock, Mrs. S. Henry, Mrs. J A. Mahaffy, Mrs. H. Stadle, Mrs. Carl A. Warner. Philadelphia Chapter—Delegates: Mrs. W. E. Lee, Mrs. F. T. Burke, Mrs. H. C. Clapham, Mrs. R. H. Blackwood, Miss Anna M. Kessler, Mrs. A. R. Hoffecker, Mrs. J. C. Peacock, Mrs. A. Hunsburger, Mrs. Carl Shull, Mrs. M. D. Allen. Alternates: Mrs. Charles E. King, Mrs. J. J. Kelley, Mrs P. S. Rohn, Mrs. Robert Simpson, Mrs. A. G. Lubert, Mrs. A. T. Pollard, Mrs. Walter Rothwell, Mrs. George Tyler, Mrs. Ira D. Kramer, Mrs. J. Z. McDonnell.

Mobile Chapter—Delegates: Mrs. J. M. Newton, Mrs. S. H. Colvin. Alternates: Mrs. Jesse Nelson, Mrs. Zarr S. Bauer. Louisville Chapter—Delegates: Mrs. S. E. May, Miss E. Diehl, Miss E. Frick, Mrs. O. Dilly, Mrs. J. G. Krul, Mrs. Geo. Boeckman. Alternates: Mrs. J. J. Leiberz, Mrs. A. L. Suter, Mrs. H. Cohn, Mrs. O. Bader, Mrs. William Tafel, Mrs. William Fisher. Milwaukee Chapter—Delegates: Mrs. H. Lambeck, Mrs. S. A. Eckstein, Mrs. L. A. Pepin. Alternates: Mrs. W. Rhenieck, Mrs. B. Leidel, Mrs. E. G. Raeuber. Cleveland Chapter—Delegates: Mrs. Eugene R. Selzer, Mrs. C. E. Roseman, Mrs A Flandermeyer, Mrs. O. R. Goodyear.

Youngstown Chapter have changed their regular monthly meetings to an all-day war-work session.

U. S. PLAYING CARD CO.'S ADVERTISING

The U. S. Playing Card Company, of Norwood, Ohio, has just announced the 1918-19 advertising campaign for Bicycle and Congress Playing Cards, showing what the company is offering to dealers and jobbers, in a manner which promises to be the most effective advertising campaign ever launched for a commodity of this kind. The campaign will be opened by the first of a series of six dealer advertisements, intended to convince retailers that they should handle playing cards and especially that they should handle Bicycle and Congress Playing Cards. These will appear in eight of the leading trade publications, the advertisements being scheduled to appear every month, starting with the October and concluding with the March issues.

The consumer advertising will begin about the middle of October in journals of national circulation, such as the *Saturday Evening Post*, *Literary Digest*, *Hearst's*, *Everybody's*, *Red Book*, *American*, and *Cosmopolitan*, these magazines reaching almost six million of the best families in the country, and being read by nearly thirty million people. The advertisements will carry attractive, forceful illustrations and catchy, compelling headlines which will attract the attention of every reader, while the copy will be so written as to push the Bicycle and Congress brands and the Official Book of Rules, which is also intended to increase the number of card players. By the use of window display material furnished free by the manufacturers, and displaying the cards in a prominent place in their stores, as also mentioning the cards in their regular advertisements, dealers can tie up their stores with this national advertising, and thus make the campaign advertise their business.

REMINGTON'S "PRACTICE OF PHARMACY"

The 6th edition of Remington's "Practice of Pharmacy" appeared only a few months before the death of the distinguished author, which occurred on January 1 last. Urged several years ago to relinquish some of his many activities, Professor Remington yet felt that duty required him to maintain a guiding hand until the new editions of the United States Pharmacopoeia, his "Practice of Pharmacy," and the Dispensatory were completed. Before the object was entirely attained, his strong will collapsed, and in a few months the pharmaceutical world mourned the death of the great leader.

However, Professor Remington had anticipated the inevitable and had long planned his succession in his work, his textbook on pharmacy. For years he had trained Professors E. Fullerton Cook and Charles H. LaWall, who had been his students and were associated with him in the preparation of successive editions so that when sickness compelled him to drop many phases of the work, they were able to carry it to successful completion. It is therefore, no surprise to learn that the future of Remington's "Practice of Pharmacy" has been entrusted to Professors Cook and LaWall, and their selection for this duty will insure the continuance of the same high standard and the practical character of this famous pharmaceutical guide.

ECKMAN LABORATORY ANNOUNCEMENT

The Eckman Laboratory, Philadelphia, announces that it has come to their notice that some druggists throughout the United States still have in stock Eckman's Alterative with the old price of $2 and $1 upon the cartons and labels. As these prices were reduced to $1.50 and 80c per bottle respectively one year ago, they state that if druggists will forward direct to their laboratory at Philadelphia all stock bearing the former prices, they will return immediately new packages bearing the current prices. The manufacturers will also adjust and refund to such retailers the difference in price paid under the old and new wholesale rates. Their reason for this proposition to the retail trade is that no dealer will have to explain that he is carrying old stock, although Eckman's Alterative does not deteriorate with age.

EDITOR MASON DIRECTOR OF PUBLICITY

Harry B. Mason

Harry B. Mason, who has been in the pharmaceutical eye for more than a score of years as an active participant in the work of the American Pharmaceutical Association, has resigned as editor of the "Bulletin of Pharmacy" to assume the duties of an important administrative office—that of director of promotion, publicity and advertising for Parke, Davis & Co., Detroit, Mich. In his new field, Mr. Mason will have immediate supervision of the several departments where various branches of advertising work are carried on, such as the publication of the company's group of house organs, taking care of medical literature and correspondence, devising advertising aids for druggists, and advertising in the medical, pharmaceutical and dental press, the idea being to make the work of promotion and advertising more effective by bringing these several departments of the company's work into one co-ordinated system of publicity and under centralized direction.

That Mr. Mason is pre-eminently qualified for this undertaking, his friends have no reason to doubt. As a graduate of the Albany College of Pharmacy and possessing a thorough knowledge of practical drug store work, to say nothing of his ability as an author and an editor, he carries with him to his new position a combination of mental equipment and experience that is sure to spell success.

ADVERTISING TO MILLIONS OF READERS

Pyorrhocide Powder for pyorrhea prevention and treatment is now being advertised in national magazines of wide circulation—reaching approximately 15,000,000 readers. This publicity will acquaint the public as to the necessity of tooth and gum care to prevent pyorrhea and loss of teeth. The demand for this preparation is increasing rapidly and druggists are feeling the effects of the campaign which started in the magazines in September and will continue for many months.

LOOK OUT FOR MR. SULLIVAN

The Bartholomew Co., of Peoria, Ill., manufacturers of popcorn and peanut machines, have requested us to warn all dealers against one R. T. Sullivan, formerly in their employ, but now in no wise connected with them. It is charged that this party has been collecting money from dealers and not turning it in to the company. If Mr. Sullivan should call upon you, please telegraph at once to the Bartholomew Co. at their expense.

SHOWS NECESSITY FOR KEEPING ACCOUNTS

Letter to Retail Merchants Warns of Difficulty in Computing Taxes if Bookkeeping is Neglected

A general letter has been addressed to the retail merchants of the country by the Commissioner of Internal Revenue pointing out the necessity for keeping accounts in view of the difficulty in computing taxes if this is neglected. The communication follows:

Bureau of Internal Revenue,
Washington, D. C.
September 14, 1918.

To Retail Merchants:

The Revenue Act now pending in Congress is expected to produce $8,000,000,000. This means a tax on the average of more than $76 for every man, woman, and child in America. The average per family is nearly $340.

In many businesses taxes will be one of the largest items of expense. It is of the utmost importance, therefore, that every concern in business, large or small, whether corporation, partnership or individual, shall maintain an exact record of its receipts and expenses, in other words, keep accurate accounts. Taxes should be considered as an expense of the year for which they are assessed rather than for the year in which they are actually paid and the necessary reserves should be provided for at once.

Because of the large amounts to be collected, the Bureau of Internal Revenue will be compelled to check the income tax returns filed by taxpayers more closely than heretofore. The retail merchant who is able to place before the Internal Revenue Inspector book records showing exactly how he arrived at his statement of net income will greatly facilitate the Government's task of collecting the war revenues and save himself annoyance and expense.

No special system of accounts is prescribed by the Internal Revenue Bureau but the books should show in detail inventories, purchases, sales, capital investments, depreciation, and similar items required in making up the income tax return. Every merchant should study the income tax law and regulations and see to it that his accounts are kept in a manner that will enable him to determine his net income for taxation purposes.

Aside from the necessity of keeping systematic accounts in order to comply with the Government's requirements, every progressive merchant should adopt an approved accounting system for the good of his own business. In no other way can he further his financial interests more effectively. It has been proven time and time again that accurate accounts are absolutely essential to success in business. The merchant who has a good accounting system is able to eliminate waste and unnecessary expense and can so control his purchases and his credits as to greatly lessen the chance of failure. The inventory, which cannot be taken without some form of accounts, is the compass of a business. Without it the direction in which the business is heading either for success or failure cannot be determined.

In the complexities of modern business costs must be calculated with certainty in order to determine what the selling price of an article should be in order to yield a reasonable profit. This is impossible without books of account.

The profits of a business or the losses of a business cannot be determined without book records; and now that the Nation requires every citizen to contribute to the war budget within his means and income, the returns required by the Government under the revenue laws cannot be made with any degree of accuracy without books of account and inventories.

The bad debt loss of the Nation, which runs into large figures annually, is due in large measure to inexperience and inability. If merchants would keep even the simplest books of account the bad debt wastage would be reduced materially, for inability and inexperience are usually marked by the absence of an accounting system.

Owing to the withdrawal of man power from industry it is essential that every business man be more frugal and exert himself more effectively to conduct his business efficiently. Extra effort put forth in carrying on the business so as to increase volume at less expense, will decrease the chance of failure, increase the earnings of the merchant as a reward for his effort, and enable him to share more liberally in the governmental financial program made necessary for the successful prosecution of the war.

The man who knows the exact condition of his business from day to day has an immeasurable advantage over the individual who has no record upon which to base his operations. It is the duty of every citizen especially in these war times to keep in such close touch with his business through record keeping and otherwise as to maintain the greatest efficiency and render to his Government every cent due in taxes.

Daniel C. Roper
Commissioner of Internal Revenue

PROTEST HIGH ALCOHOL TAX

The National Wholesale Druggists Association has issued a circular letter to members, dealing with the new Revenue bill now before Congress, in which it is said:

"The bill provides for an increase of the tax on beverage spirits to $8.00 on each proof gallon, and a doubling of the tax on non-beverage alcohol, making it $4.40 per proof gallon or approximately $8.20 per wine gallon. It also provides for a floor tax of $2.20 per gallon on all such alcohol on which the tax has already been paid, and this floor tax will cover all such spirits as are intended for sale as alcohol or for use in the manufacture or production of ANY ARTICLE INTENDED FOR SALE. This tax, however, will not apply to non-beverage alcohol removed from the original containers before the act takes effect, which is in process of manufacture, and which involves the addition, in good faith, of drugs or other ingredients, which will not be liable to any additional tax.

"It is hardly necessary to emphasize the disastrous consequences to the drug and allied trades of the adoption of such a high rate of tax, which would make necessary an enormous addition to the price of a large proportion of all articles manufactured by wholesale and retail druggists and almost the entire line of pharmaceutical preparations, proprietary articles and many chemicals. This tax added to the high tax which is contemplated on finished medicinal and toilet preparations would result in making the price prohibitive to the public on a great many articles.

"You are therefore requested to immediately communicate either by wire or promptly by mail, with the two Senators from your State, protesting against the passage of section 600 of the Revenue Bill, telling them of the effect which its passage would have upon your own business, and of the greatly increased cost to the consumer on his medicines."

JOHN J. MOLLOY MAKES A CHANGE

John J. Molloy, who has been connected with the house of McKesson & Robbins for the past 30 years or more, has severed his connection with that concern and accepted the position of manager for Hance Bros. & White. Mr. Molloy will divide his time between the home office in Philadelphia and their New York office at 105 Beekman Street.

ESTABLISHED 1887

THE PHARMACEUTICAL ERA

AN ILLUSTRATED MONTHLY PUBLICATION FOR THE DRUG TRADE

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A BINDER
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Pharmacists and the Epidemic

The heroism of battle appeals to the imagination and oftentimes incites the world to nobler actions, but no higher accomplishment in the scale of ultimate justice can there be than the service which has been rendered by those who, foregoing their own pleasures, have contributed their best endeavors to the saving of human life. In this sense, pharmacists have met the unusual demands made upon them for drugs and medicines in the great epidemic of Spanish influenza now raging throughout the land, and they are to be congratulated upon the great service they have rendered to the cause of humanity. The exacting hours of continuous toil, the sleepless nights and the hardships that pharmacists have undergone without the help of their registered drug clerks, will furnish the facts for a most important chapter in the future of history of our drug stores in wartime. As we see it, no stronger evidence is needed to prove that pharmacists are essential to the material welfare of the country, and that they are needed quite as much at home as they are needed in the Army.

Colleges of Pharmacy After the War

There is a well-founded belief that the universities after the war will be recognized by the Government as the training schools for national-efficiency, for it is claimed that trade, commerce, manufacture, science, and the knowledge of the activities that go to make up the national welfare in general will require such stimulation that they will have to be nationally organized. From a survey of the conditions existing at the present time the fact is driven home that this belief is no dream, for the National Government has already taken over about 300 of these institutions and all of the younger boys from 18 to 20 who are selected by the draft are to have some preliminary mental as well as military training, the object being to fit them to take their places in the most effective service they can give to the defense of their country.

The effect of this attempt to nationalize the educational institutions of the country is very apt to remain long after the present conditions have ceased to exist. With the prospect of universal military service that is likely to come as the result of the country's experience in the present war, we can well believe that colleges of pharmacy will have their own special problems to deal with in the future. Just what direction the new order of things will take cannot now be clearly forecasted, but in the future progress the pharmacist must take his place or be relegated to a less important position in the economy of the world's work.

With this outlook is conjoined the future status of the pharmacist in the Army. The main opposition to establishing a Pharmaceutical Corps and awarding commissions to pharmacists has come from the Surgeon General of the Army, while undoubtedly many officers also express their opposition to such advancement on the ground of lack of general education on the part of those who take up the study of pharmacy. They say, with some degree of reason, that the average individual who does not possess the equivalent of a high school education is hardly fitted to perform the multifarious duties of an officer, however well he may be equipped to dispense medicines and attend to the perfunctory duties of his assignment. But pharmacists will be needed in civil life as well, and colleges of pharmacy will be wanted to equip men and women for this kind of work. However one may choose to look at the situation, there is much work ahead for pharmaceutical educators. To catch the forward step in this intensive educational training requires careful thought and planning. With universal military training the future pharmacist will be taught how to take his place with the Nation's defenders. He must also be taught how to make his professional training count most for himself and pharmacy.

Pharmacy and Foreign Languages

In looking forward to the possibilities of after-war trade, much thought has been given to the position of foreign languages in our schools, trade, and industry, and with this thought in mind the Bureau of Foreign and Domestic Commerce at Washington is soliciting the views of thoughtful citizens as to the things the United States should do to improve our national equipment for successful over-sea commerce. That some attempt should be made to qualify ourselves in this direction is emphasized by the fact that the British Government has already explored the question more widely than any of the other Governments and brings to the front the important conclusion that language efficiency will be a necessity under the new conditions that will obtain after the war, and that as a result, "competition is going to be sharp, and preparedness for it is a national duty."

Pharmacists, at least many of them, have always been interested in a speaking knowledge of languages, and in the past it was not uncommon for many proprietors, at least those in populous and cosmopolitan centers, to advertise for clerks who understood various foreign languages to deal with the representatives of the different nationalities who might patronize their stores. In more recent years, the demand for the use of this linguistic acquirement lessened somewhat, as the emigrant to our shores became acquainted with our language. Beyond the pharmacists who had come to this country from a foreign soil, and those who had acquired a knowledge of a foreign language by accident of birth, a polyglot understanding of modern tongues has never been a strong asset of the American pharmacist.

This fact is largely a matter of common knowledge. In the past, beyond the ability to translate the customary phrases of prescription Latin into the vernacular, a knowledge of other languages was scarcely necessary, except as has been stated, but now with our projected entrance into commerce as a world power, the importance of training in this direction is emphasized and the demand pressing. To some extent the United States has made headway in the study of Spanish, and it is to our credit that the United States Pharmacopoeia was translated and published by the Board of Trustees of the Pharmacopoeial Convention in 1909, primarily for use in our insular possessions, but also in the hope that it might prove of service in stimulating our trade relations with the countries of Central and South America. This was a step in the right direction, but further effort is necessary. Manufacturing pharmacists, especially, are sure to demand a large number of workers who, besides having pharmaceutical and business ability, will be required to have an adequate knowledge of one or more foreign languages.

The Late John C. Gallagher

In the death of John C. Gallagher, announcement of which is made on another page of this number of the Era, pharmacy loses an energetic representative and one who possessed many sterling qualities. Always an interesting personality, he had the happy faculty of interesting others, especially pharmacists, in the necessity of associating themselves together for their common good, and so that their individual problems, if they had any, might be worked out by the aid and intelligence of the many. Long proprietor of a thriving pharmacy in Jersey City, he early became a leader in his local organization from which it was but a step to the councils of the N. A. R. D., in whose future he took great interest and to which he contributed much of his ability and time. He was also an enthusiastic member of the A. Ph. A., and a former president of the New Jersey Pharmaceutical Association. Gifted as a debater, he had a high conception of the value of honesty, hard work and intelligent direction, and for these qualities he will long be remembered by those for whom and with whom he so industriously labored.

TRAINING PHARMACISTS

In order to meet the emergency that has arisen through the taking of so many druggists and drug clerks for war service, the North Pacific College, Portland, Ore., has arranged an intensive course of training in pharmacy covering a period of eight months. The course is open to men and women and is so arranged that those taking it can return at a future date and by completing a course of one year receive the degree of graduate in pharmacy. The demand for skilled pharmacists in the Northwest is very heavy and many calls for help cannot be filled.

Production and Uses of Camphor

World's Consumption Large and Available Supplies Scarce

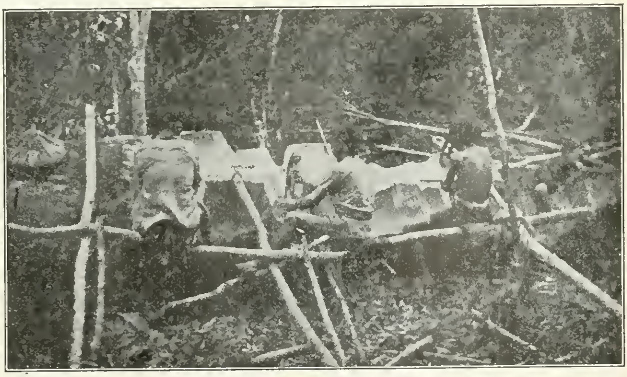
Early mentioned in Arabian literature and for some centuries thereafter regarded along with musk, ambergris and sandalwood as a rare and precious perfume, camphor was not known as a medicine in Europe until about the 12th century. Exportation began, so far as the records go, about the middle of the 16th century, since which time camphor has found a place in the markets of the world. China, Japan and Formosa are the principal producing countries, although various attempts have been made in sub-tropical regions to develop a camphor industry. The reputation of the drug as a prophylactic in preventing the spread of the Spanish influenza recalls its use in other great epidemics, as the cholera.

PERHAPS no greater advance in the price of drugs can be recorded than that which has followed the history of camphor since the fateful day in 1914, when the German Emperor took the step which set the world ablaze and fastened upon civilization burdens destined to be carried beyond the life of any now living. Just prior to the declaration of the war, camphor was selling around 40 cents per pound by the barrel, and since that time the price has been gradually advancing, so that by January of the present year jobbers were quoting refined camphor at 70 cents, and the Japanese variety at 78 cents; in March the price had advanced to $1.03, since which time there has been a spectacular advance, market reports recording the the high price of $3.50@$3.75 per pound for refined, and corresponding prices for the Japanese variety.

Imports Decreasing

These price developments have served to create renewed interest in this drug, which is scientifically described by the Pharmacopoeia as "a ketone obtained from *Cinnamomum Camphora*," a tree growing abundantly in Formosa, Japan, and the Chinese dominions, and which has been the subject of cultivation in other parts of the world. A study of the imports for the last three years serves to throw an interesting light upon the commercial position of camphor at the present time. As shown by the summary of the Department of Commerce, there were imported into the United States in 1916, 4,574,430 pounds of refined and natural camphor, valued at $1,326,172, and 1,866,154 pounds of Japanese camphor, valued at $619,320; in 1917, 6,884,950 pounds of refined and natural camphor, valued at $2,101,239, and 4,263,815 pounds of Japanese camphor, valued at $1,972,351; while in the fiscal year ending June 30, 1918, the imports had fallen to 3,638,384 pounds of refined and natural camphor, valued at $1,451,050, and 1,189,932 pounds of Japanese camphor, valued at $819,431.

With this decline in the importation during the past year, camphor refiners, especially those in this country, have experienced many difficulties in endeavoring to meet the demands that have been made upon them. One reason is due to policy of the Japanese Government to send less and less crude camphor to the consumers of the world, and more refined camphor from refineries operated in Japan with Japanese labor. As a result of the acute shortage of the crude camphor, the American refiner under his contracts with consumers was obliged to purchase camphor wherever he could obtain it, and it was not long before he was unable to supply the demands made upon him except in the most restricted way. This condition was further accentuated by the fact that an unusual demand had arisen for camphor as a remedy for the treatment of the so-called Spanish influenza, the War Trade Board, early in September, having authorized the exportation of a certain quantity to Norway for use in counteracting the disease. The domestic demand for camphor for the same purpose came from nearly every quarter, retail druggists having a constant stream of customers for the "gum," as well as the spirit, both of which are



Natives Chiselling Chips from a Camphor Tree used by inhalation and in many instances, with as much faith in the efficacy of the remedy as our forbears exhibited in their efforts to drive away the evil spirits which oppressed them.

Japanese vs. Borneo Camphor

Scientifically, the name camphor is applied to various concrete, white, odorous, volatile products, found in different aromatic plants, and resulting probably from the changes brought about in the composition of their volatile oil, by causes not so very well understood. As already stated, our official camphor is derived from the *Cinnamomum camphora*, and it is the product we usually associate with the name whenever we hear it spoken. But another variety, known as Borneo camphor, derived from the *Dryobalanops camphora*, is much valued in many of the Eastern countries, although its consumption heretofore in this country has been extremely limited on account of its high price. The latter product resembles true camphor, but is distinguished from it by being heavier than water and is not volatile at ordinary temperatures. Borneo camphor is obtained by scraping the wood and not by distillation. One of the curious phenomena connected with the chemistry of Borneo camphor is that it is converted into true camphor by the action of nitric acid, while on the other hand, when true camphor is treated with reducing agents, it is converted into Borneo camphor.

The tree producing the true camphor is a handsome evergreen somewhat resembling the sassafras, but which sometimes attains a great size, the trunk straight below, but divided above into many branches, which are covered with a smooth, greenish bark. While it is a native of Eastern Asia, it is capable of cultivation in most subtropical countries, and trees are found in Southern California and Florida in our own country, and in Southern Europe, Madagascar, India and Ceylon. In Southern California trees presumably forty years of age reach a height of sixty feet, and three feet in diameter at the base.

Source of Commercial Supplies

As is well known in the trade, the principal commercial supplies of camphor come from Japan, China, and Formosa, the last named island producing the greater part of that entering the markets of the world. In Japan and Formosa the camphor is obtained chiefly from the root, trunk, and branches by the process of sublimation. In Formosa, the camphor trees are found only in the mountainous districts, in the heart of the island, which for hundreds of years were in the possession of the head-hunting tribes of that country, and who fiercely opposed all attempts to get into the forests. By an apparent perversity of nature the camphor trees seem to flourish best in the regions inhabited by the fiercest tribes, and the hostility of these natives made the gathering of camphor a most hazardous occupation. Travelers have repeatedly stated that the loaded rifle was the most indispensable tool for the camphor harvester.

Gathering Camphor in Formosa

Since the Japanese occupation of Formosa, however, the fatalities in the work of gathering camphor decreased, a result accomplished partly by the conciliatory policy adopted by the Japanese officials, and partly by the civilizing influences of a stable government which the authorities established on assuming control of the island. There is still much to be done in this direction, however, before the native opposition to camphor gathering will be entirely obliterated. Since the Japanese took the island after their successful campaign against China in the 90's, they have been carrying on a carefully conceived plan of gradual penetration of the valuable camphor regions. As told by travelers, they make paths six feet in width through the virgin forests. At intervals of every 120 yards stands a guardhouse and every fourth or fifth guardhouse is a small fort, intrenched and defended by barbed wire entanglements. Telephonic intercommunication, machine guns and all of the resources of western military science are employed, and the lines are pushed gradually forward.

The camphor monopoly, directed by the Formosan Government, began its operation about 1900, and for nearly a decade the financial returns were phenomenal, one of the American consuls reporting that in 1906-7 the profits amounted to $1,500,000 in gold. In 1907, a reaction from these high prices followed, caused in part by the appearance in the market of the German synthetic camphor, and in part by business conditions depressing the world's markets generally. A few years later the business recovered somewhat, and until the outbreak of the present war, the production has gone forward in a very even manner.

Government Control in Japan

At the conclusion of the Russian-Japanese war, the people of Japan turned their attention to this product, and the trade was monopolized by the Government, which appointed a bureau to superintend the industry. To stimulate the production, the Government increased the buying price from the producers. As the supply of camphor trees in Formosa was in danger of exhaustion, the Government authorized the planting of 11,086,184 trees during the years 1906 to 1909. Extensive expeditions were organized to further explore the island, and the whole industry was put upon a scientific and organized basis. Domestic production in other parts of Japan was also encouraged, and until recently the various sources of supply have been adequate to meet the world's demands.

Under the Government monopoly regulations, all camphor and camphor oil that are produced must be sold to the Monopoly Bureau. Under this system the amount of camphor to be placed on the market, the price to be paid to the producer, and the price to be paid to the vendee are fixed by the Government. The camphor is sold by the Japanese Government. The privilege of engaging in the camphor industry is granted to individuals and companies upon application, and after furnishing satisfactory evidence of financial standing. Certain territory is allotted to each operator, who is required under the terms of the agreement to confine his operations to the district designated in his license.

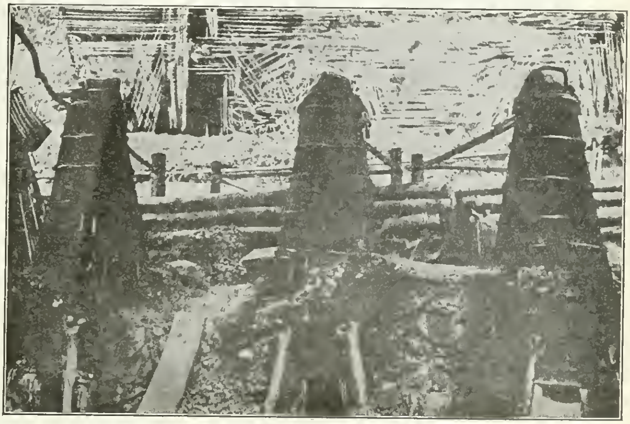
Distilling the Camphor

The methods of obtaining camphor differ slightly in different localities, but agree in their main features. As soon as the operator is allotted his district, a stove, or still, is erected in some suitable place near the largest supply of camphor trees. While this still is being constructed, a tree is selected and the workers begin to cut the chips with a chisel-like knife; the finer the chips the more readily is the process of distillation carried on. One of the illustrations here presented, shows the worker chiseling or cutting chips from the body of a large camphor tree, while to the right is a rifle—an ever needed protection to the worker in many sections of Formosa.

A second illustration presents a correct outline of the camphor still now quite generally employed. Over the fire place is a pan filled with water. Above the pan is constructed a very tight wooden receptacle, about 3 feet in diameter at the bottom, 1 foot at the top, and 5 feet high. This receptacle, or circular retort, is filled through an opening at the top with chips of camphor wood. This opening is closed by a double lid, and earth banked around the lower section of the retort to prevent the escape of the camphor fumes. Just above the water pan are thin slats of perforated bamboo through which apertures the steam passes into the chips above, extracting the camphor. Near the top of the retort are two bamboo pipes through which the vapors are conducted to the cooling box, some 10 feet distant. This cooling box is divided into two compartments; the lower is filled with cool water, and the upper is equipped with a wooden screen, upon which the camphor vapor crystallizes. Connected by a bamboo pipe with the cooling box is the crystallization box, its construction being the same as the cooling box. Both boxes are immersed in water, which hastens the process of crystallization. The distillation requires about twenty-four hours; then the chips are removed by an opening in the lower section of the retort. Other forms of apparatus are often only some sort of a steam chamber, as inverted earthen pots, the steam driving off the vapor of camphor, which is condensed, collected, and drained of its oil, then pounded or pressed into barrels as crude camphor.

Differences in the Crude Product

As stated by experts, the crude camphor of the different producing regions presents differences, that of Japan being lighter-colored, more pinkish and coarser grained, dry to the touch, and much more valuable than that of Formosa, although new conditions are now leading to an improvement in the quality of the latter. As refined at the Government works at Taikohu, Formosa, several thousand pounds are treated at one charge. In refining, the water and oil are first driven off by a low heat; the aperture is then closed and another established, through which the camphor is sublimed. The product is then pressed in hydraulic presses into blocks for export.


A Typical Formosan Camphor Still

In the past, camphor in immense quantities has been refined in this country in New York and Philadelphia. The process is said to consist in heating the crude camphor with about one-fifth its weight of quicklime, which removes adhering moisture, in shallow, covered iron pans, and when the camphor melts, it is sublimed by means of carefully regulated heat, being obtained in circular cakes from 1 to 2 inches in thickness and about 15 inches in diameter. Another plan is to sublime the camphor in large receivers, and to compress it into blocks weighing 3 or 4 ounces and about 2½ by 4 inches square.

Development of Industry in the United States

The question of a crude camphor supply is an important one at the present, as will be seen from a consideration of the statistics furnished by the Department of Commerce and the difficulties that American refiners have met in their attempt to supply their needs. While it is true that there has been some satisfactory work done to create a camphor industry in this country, the actual results obtained figure very small in the total of the world's consumption. Camphor is cultivated on a commercial scale in Florida, one grove, it is said, producing 40 tons annually, but this is but a drop in the bucket to the supply needed. Two new developments are also reported to be under way, one which will soon have about 2000 acres under cultivation and the other, about 10,000 acres. Figuring on a yield of 20 pounds of camphor to the acre, experts estimate that at least 175,000 acres would be required to meet present demands. As it takes at least five or more years to bring trees to full bearing, the present outlook is not reassuring. At the same time, it is believed that the work so far done in Florida points the way to the development of a new American industry.

A Florida Camphor Tree

Therapeutics of Synthetic Camphor

The world's consumption of camphor is very large, for besides its use in medicine, the manufacture of celluloid ware consumes enormous quantities. It is also used in the manufacture of smokeless powder and other purposes. This great demand has given rise to its synthetic production from oil of turpentine on a commercial scale, especially in Germany, where the manufacture assumed considerable proportions. It is believed that production has not been lessened since the beginning of the war, for Japanese exports of camphor to Germany ceased when Japan became a belligerent. For technical purposes in manufacturing, and for use as an external application, the synthetic variety is in demand, but medical authorities state that the therapeutic action of the two varieties is not at all identical, the synthetic variety, according to Pari and Bruni, being much more toxic than the natural camphor.

Prophylactic for Epidemics

Camphor has been employed in medicine as a remedy for diseases of a widely differing character. Therapeutically, it is classed as an antiseptic, analgesic, carminative, diaphoretic, stimulant, and sedative; probably its most valuable use is as a diffusible stimulant for the purpose of supporting the system during a crisis in a severe illness, or when collapse is threatened. It has a wide-spread reputation as a prophylactic, on which account it is in great demand during serious epidemics, its use by the laity in the treatment of Spanish influenza being in keeping with its past record in the treatment of cholera and other contagious diseases. Its use by naturalists and others for keeping furs, skins, and other substances from moths, and to preserve entomological collections from attack, is equally well known.

The Layman's Point of View

We have heard anathemas cast upon the presumption of the "arm chair merchant" in attempting to show the dealer how to run his business. We often have noticed the scorn with which the store-keeper in one line or another receives the efforts of the writer in his trade journal to direct his feet in the way of prosperity and affluence, and in a way our sympathy is with the merchant.

At first glance it does seem as though the professional writer is exceeding his authority when he gives advice and offers arbitrary regulations for the buying and selling of goods which he has never handled from behind the counter. Upon analysis, however, he is seen to be equipped with one qualification which not only entitles him to a voice in the matter, but which actually rates him as an expert, up to a certain point.

He is the man who buys what you sell.

When the layman advises you to incorporate certain policies into your methods of doing business, he is expressing the opinion of the man upon whom you are dependent for your success in business—your customer. He is talking to you from the front of your counter. He is telling you how he would like you to treat him, and the chances are he is expressing the opinion of the great majority of your customers.

When the retail merchant gets the viewpoint of the customer thoroughly implanted in his mind, he has accomplished nine-tenths of his success in business, and until he looks at his business from the front of the counter, his education is not complete. This is what the layman's advice will help him to do. It will show him what the customer is thinking of him and his methods. It will tell him what the public is expecting of him. It will make him acquainted with the most important personality associated with his business.

So, perhaps the lay writer is not so presumptuous, after all.

RECENT DISCOVERIES BY CHEMISTS

Research chemists in the laboratories of the Chicago packing companies have discovered a way to make surgical ligatures which will dissolve in the flesh at the end of a definite period. They are "timed" for 10, 20 or 30 days and the surgeon needs but exercise his judgment as to when the wound will heal and then select the ligature accordingly.

Another discovery, thromboplatin, is a blood coagulator obtained from the brain of kosher-killed cattle. This material already has been exported to France and used there to hasten the coagulation of blood in soldiers' wounds.

A new curdling agent, rennasse, can now be made from the stomach of the hog. The scarcity of rennet, obtained from the calf's stomach, can no longer cripple the cheese industry, in spite of shortage in imports from Denmark.

Narcotic Drug Evil, a Dangerous Menace

By ALBERT J. WEBER, New York

As foreman of Grand Jurors, United States of America for the Southern District of New York, and foreman of the New York County Grand Jury, Mr. Weber has officially investigated the subject of narcotic drug control for many years, and in the following paper he records many of the facts that have come under his observation as a Federal official. As he sees it, narcotic drug addiction is a most serious and dangerous menace to human civilization, inflicting even greater injury upon the race than alcoholism. In his opinion, the illegitimate supply of narcotic drugs is greater than ever before known in the history of the underworld, and it is imperative that an official and exhaustive medical investigation should be undertaken by the Public Health and Internal Revenue Service with the object of obtaining a comprehensive knowledge of all of the facts pertaining to narcotic addiction and control.

IN the latter part of December, 1917, at the request of Senator George H. Whitney, chairman of the New York State Legislative Committee investigating the matter of narcotic drug addiction, I testified before the Committee as to my official investigations as foreman of the Grand Jurors, United States of America, for the Southern District of New York, and also as foreman of the New York County Grand Jury, State of New York, as to my personal investigations for many years and my individual studies and search for clinical information of narcotic drug addiction in England, France, Germany, Austria, and United States. I do not hesitate to make the unequivocal and positive statement which is based upon my experience as foreman of Grand Jurors for many years and the testimony of narcotic drug addicts, revenue officers, chemists and physicians under oath, that this gigantic narcotic drug evil is a most serious and dangerous menace to human civilization, and far more disastrous in its effects than alcoholism is or will ever be.

Source and Distribution Should Be Controlled

Human lives are destroyed through narcotic drug usage. I found as foreman of Grand Jurors, that this evil was beyond the United States Statutes and I immediately drafted official resolutions, had them adopted and legally filed in the United States District Court by order of the presiding Justice. These resolutions call upon the United States Attorney for the Southern District of New York to take up the subject with the Department of Justice and to cause a bill to be prepared for submission to Congress for the enactment of broad and suitable statutes that will eliminate this evil in so far as this can be done by statutory enactment, and which will regulate and control the source of the supply of narcotics and their distribution.

The resolutions recite that the entire output of the production and manufacture of opiates by all manufacturing and pharmaceutical chemists and all other manufacturers of products of opium or coca leaves, their salts, their derivatives or preparations, etc., shall be in absolute and direct control of the United States Government, and that chemists and internal revenue officials shall be assigned to all these plants throughout the United States, its territories and possessions; that the output of the manufactured product shall be shipped to the various Government warehouses, zones being established therefor throughout the United States; that the Government officially shall control the price and the quantities of narcotic drugs shipped to the various wholesale druggists, jobbers, dealers, retailers and pharmacists: that all of these and all manufacturing plants shall be bonded and licensed, and that the Government shall supervise and control exclusively all import and export shipments of such drugs.

What the Evidence Shows

It was astounding to hear unfortunate and suffering addicts testify as to the ease with which they purchased opium, morphine, heroin and cocaine from persons dealing, peddling or otherwise trafficking in these drugs upon the streets or in places known to them, their customers and slaves. This is a condition which obtains at the present time. This traffic is carried on by some of the worst criminals, and has associated with it abominable activity in the recruiting of the youth of the city as future customers.

It was also revolting and shocking to hear how certain physicians unscrupulously and illegally engage in the supply and sale of narcotic drugs; how they promiscuously wrote prescriptions for narcotic addicts under the guise of correctional medical treatment and promised medical cure, the prescriptions being taken by the addicts to certain druggists for compounding at fabulous prices. These physicians wrote prescriptions calling for the compounding of various narcotic drugs in amounts exceeding the actual requirements of the narcotic addicts and beyond the requirement of any possible therapeutic necessity, the prescriptions being only a criminal subterfuge.

Supply in the Underworld

I have found that between the criminal traffic, street peddling, and the physicians of the type I have described, an addict with the necessary funds can purchase all the narcotic drugs he may want, and it is exceedingly easy for those who know how to go about getting such narcotics. I have officially investigated the matter and have found that the illegitimate supply is far greater than was ever known before in the history of the underworld. The testimony in many cases was startling and it was pathetic to listen to some witnesses, both men and women, who, in good faith and in hope of a radical cure had gone to certain physicians and were given spurious and worthless cures or treatments. These physicians were really exploiting the helpless narcotic addicts, and commercializing their terrible misery without giving them any relief. It is difficult to understand the conduct pursued by such physicians who thereby stigmatize the entire profession of the healing art. I caused the indictment of several dishonest druggists and physicians who were convicted and are now serving their sentences.

Impartial Medical Investigation Needed

I have made a study of narcotic drug addiction for many years, visiting and consulting with the greatest professors at the universities and their clinics at Jena, Heidelberg, Freiburg, Munich, Vienna, Berlin, Paris, London, and in this country. I have also consulted the leading pharmaceutical and chemical authorities and manufacturers in Germany, England and Scotland. Therefore I believe I am in a position to interpret the evidence presented and to express my convictions on the strength of personal research work in the study of medicine and demonstrated to me by the most famous and eminent clinicians in Europe. My personal experience for many years as foreman of the United States Grand Jury has convinced me that the United States Public Health Service at Washington must be a factor in any law that is to be enacted, so as to insure impartial medical investigation and to find out how to best take care of the narcotic drug addicts and safeguard their future lives. I suggested to the Department of Justice that the United States Public Health Service should take steps by initiating an exhaustive study in the prevailing universal condition of narcotic drug addiction, and the present methods of treating this calamity; that it should further provide intelligent and humane care for the handling of persons suffering from narcotic addiction, enter upon a schedule of lay and medical education concerning narcotic drug addiction making use of all the authentic facts surrounding it, and whatever clinical or pathological material so far proved. It is most essential and imperative that an official and exhaustive medical investigation be made by the combined powers of the Public Health and Internal Revenue Services of all the so-called "treatments" and "cures," and that their intrinsic therapeutic value be absolutely established.

Narcotic Drug Addiction a Disease

I have discussed officially with several of the United States District Court Justices the control of these violations of narcotic drug laws, and I have asserted that we must proceed simultaneously on two lines: First, it is necessary to control illegal and criminal distribution, whether the illegitimate distribution is through the underworld street peddler, or through the medium of dishonest members of the medical and pharmaceutical professions; second, for the sake of compassion and the practical handling of the problem of disease and sickness in the addict, to obtain humane and skillful medical care and treatment by honest physicians, reliable institutions or other reputable means. It has been established beyond a doubt by scientists that narcotic drug addiction is a disease and should be so treated. The quicker physicians realize this vital fact and endeavor to understand the final determination of what the exact authentic pathology of this disease is and the salient principles upon which clinical treatment can be practically and in genuine faith worked out, the quicker the narcotic problem will be under control.

We have now reached a certain stage in this gigantic problem and are halted by lack of medical information. Further progress is dependent upon the advice of the medical profession as to the further solution of the problem and the best means of combating this diease. In the meantime physicians must try to identify and isolate the material in the body which causes the frightful suffering of this disease. English, Continental and American research authorities whom I have consulted, have characterized or termed the production of this substance as a "phenomenon" in the human system; and we must dislodge and liberate the production in the body of that which causes the distressing agony, and toxic symptoms for narcotic desire. Alkaloidal and physiological chemistry combined with careful and thoughtful clinical study must be the dominant factors of the investigation that will ultimately determine the character of this phenomenon and its results.

Use of Narcotics in the Army

I have called the attention of the Secretary of War to the matter of narcotic drug addiction and have referred to the very serious situation that the boys in the American Army on the European battlefield will be forced to meet in the necessary administration of opiates at the front. It has been determined that a considerable number of those already wounded on the battlefields have had this condition unavoidably developed in them. We shall not be fulfilling our national duty to them if our activity and that of the scientific professions are not directed toward saving the lives of the soldiers from narcotic slaughter, which is a never ending misery of mind and body, compared with which a heroic death on the field is far more merciful.

I believe we are awakening to the fact that ignorance has been the real cause of our narcotic drug problem. We have handled narcotic drug addicts like people of weak wills, criminal and other tendencies, and we have taught them to be such; in reality, these addicts have been sick and suffering great bodily torment, and what they need most is medical and scientific consideration. I can not close this article on narcotic drug addiction without making a most vehement appeal for the immediate and urgent consideration of every medical military authority on this matter.

Facts Relating to Spanish Influenza

Its Identity with Epidemics of Earlier Years Not Yet Known

By E. CARTER NORTON

The prevalence of "Spanish influenza" throughout most of the civilized world and which at the present time is ravaging many sections of the United States, has called for a statement of the general facts pertaining to the disease, so far as they have been elucidated by medical men and bacteriologists. In this article Mr. Norton summarizes much of this data from authoritative medical sources. A study of the similarity of the present epidemic to the epidemic of pneumonia plague which broke out in China in 1910, prompts the opinion held by some authorities that the Spanish influenza may be the same disease modified by racial and topographical differences. In the treatment of the disease the salts of quinine, Dover's powder, and aspirin are among the remedies in great demannd.

No epidemic in recent years has produced such agitation in every section of the country as that which is popularly called "Spanish influenza" and which is now prevalent in every community. So far as medical authorities have studied the disease, the influenza is neither new nor particularly mysterious. According to the Division of Sanitation, Bureau of Medicine and Surgery, Washington, recent reports from Spain, Austria, Germany, Switzerland, France, Great Britain, Hawaii, and elsewhere, indicate the presence of another pandemic of influenza similar in extent to others which have been reported since the sixteenth century. There have been four pandemics succeeded by epidemics during the last century, the last one occurring during the years 1889 to 1892. At the same time, it is authoritatively stated that whether "Spanish Influenza" is identical with the epidemics of influenza of earlier years is not yet known.

Epidemics of influenza have visited this country since 1647, and those who have studied the history of these visitations state that this first epidemic was brought here from Valencia, Spain. Since that time there have been numerous epidemics of the disease. In 1889 and 1890 an epidemic of influenza, starting somewhere in the Orient, spread first to Russia, and thence practically over the entire world. Three years later there was another flare-up of the disease. Both times the epidemic spread widely over the United States. Although the present epidemic is called "Spanish influenza," there is no reason to believe that it originated in Spain. Some writers who have studied the question believe that the epidemic came from the Orient and they call attention to the fact that the Germans mention the disease as occurring along the eastern front in the summer and fall of 1917.

In answering the question as to the relationship of epidemic influenza to the ordinary catarrhal fever or "grippe," Osler quotes Leichtenstern's divisions (Nothnagel Handbuch):*

(a) Epidemic *influenza vera* caused by Pfeiffer's bacillus.

(b) Endemic-epidemic influenza caused by the same organism which often follows a pandemic.

(c) Endemic *influenza nostras*, pseudo-influenza, or catarrhal fever, commonly called *grippe*, which is of unknown origin and bears the relation to true influenza that cholera nostras bears to Asiatic cholera.

As described by medical authorities, the disease now occurring in this country resembles a very contagious kind of "cold" accompanied by fever, pains in the head, eyes, ears, back or other parts of the body, and a feeling of severe sickness. In most cases the symptoms disappear after three or four days, the patient then rapidly recovering; some of the patients, however, develop pneumonia, or inflammation of the ear, or meningitis, and many of these complicated cases die. The onset of the disease is accompanied by fever which varies from 101 to 105, headache, pains in the muscles and bones, and a good deal of prostration; there is a dry, nagging cough, with at first a little expectoration. There may or may not be profuse discharge from the eyes and nose; the throat may be quite red, sometimes intensely so, more often it is not markedly affected. Commissioner Hermann M. Biggs of the New York State Department of Health, states that the course of the disease when uncomplicated is short, the temperature falling in from 48 hours to three days to normal. In some cases the disease begins with vomiting and diarrhea, and the catarrhal symptoms only appear later on.

In addition to typical cases, Dr. Biggs states, many atypical ones occur which present only the symptoms of an ordinary cold with no marked rise in temperature or great prostration, and even in the same household will be found typical and atypical cases, in all probability caused by the same type of organism, the different reaction being dependent upon the different degrees of resistance of the individuals affected. The disease is seldom fatal of itself except in very susceptible or weak individuals. The complications, however, of pneumonia, are very much dreaded; many deaths have already occurred from pneumonia. According to the U. S. Public Health Service, the proportion of deaths in the present epidemic has generally been low, in some places the outbreak has been severe and deaths have been numerous. When death occurs it is usually the result of complication.

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*Public Health Reports, 33, 1542.

Causes and Propagation of the Disease

Bacteriologists who have studied influenza epidemics in the past have found in many of the cases a very small rod-shaped germ called, after its discoverer, Pfeiffer's bacillus. In other cases of apparently the same kind of diseases, there were found pneumococci, the germs of lobar pneumonia. Still others have been caused by streptococci, and by other germs with long names. Health authorities uniformly state that no matter what particular kind of germ causes the epidemic, it is now believed that influenza is always carried from person to person. the germs being carried along with the very small droplets of mucus expelled by coughing or sneezing, forceful talking, and the like by one who already has the germs of the disease. They may also be carried about in the air in the form of dust, coming from dried mucus, from coughing or sneezing, or from careless people who spit on the floor and on the sidewalk. As in most other catching diseases, a person who has only a mild attack of the disease himself may give a very severe attack to others.

Management of the Disease

It is very important that every person who becomes sick with influenza should go home at once and go to bed. This will help keep away dangerous complications and will, at the same time, keep the patient from scattering the disease far and wide. It is highly desirable that no one be allowed to sleep in the same room with the patient. In fact, no one but the nurse should be allowed in the room. If there are cough and sputum or running of the eyes and nose, care should be taken that all such discharges are collected on bits of gauze or rag, or paper napkins and burned. If the patient complains of fever and headache, he should be given water to drink, a cold compress to the forehead, and a light sponge. In all cases, it is recommended that the patient be placed in the care of a competent physician, and the pharmacist will do well to adhere to this advice. It is in line with the duty of the pharmacist, however, to supplement in every possible way the treatment outlined by the physician, furnishing remedies and such other articles as are needed in the sick room.

Reference to various medical journals reveals that the remedies most commonly employed include the salts of quinine, aspirin, Dover's powder, and various other drugs prescribed by the physician to meet such conditions as may arise. According to the British *Medical Journal*, the use of gargles appears not to influence the course of the disease, but the free use of aspirin certainly mitigates the patient's discomfort. In the matter of prophylaxis, however, free ventilation seems to be imperative, and there seems to be a necessity for keeping the patient in a room suitably heated and yet so arranged as to avoid draughts.

Application of Sanitary Measures

Hand in hand with the treatment of the sufferer from influenza goes the practice of sanitary measures, and from his knowledge of methods and the use of disinfectants in general the druggist should be able to give inquirers considerable information. Those who will not employ a physician when advised to do so, will demand remedies of widely differing character. As an instance of this, there is a very large demand in New York at the present time for camphor, writers in the newspapers repeatedly asserting that it is a most valuable remedy for the disease when inhaled in the form of the spirit of camphor, or a small piece of the camphor may be burned and the fumes inhaled, the inhalation being repeated two or three times at short intervals.

Boards of health in the different States and municipalities have adopted various regulations to combat the disease, but these are far from uniform in scope and application. People have been advised not to congregate in crowds, and in New Jersey, orders have been issued to close "all churches, theaters, moving picture houses, dance halls, soda fountains and other places where people congregate." On the other hand, the Bureau of Medicine and Surgery of the U. S. Navy, in connection with measures for the prevention of the introduction of the disease into this country, has stated that quarantine and isolation are impracticable on account of the wide distribution of the organism in healthy persons and the number of unrecognizable cases. In all cases, however, patients should be put to bed at once, and bed isolation, prevention of droplet infection, and prompt disinfection of mess gear, handkerchiefs, etc., practiced.

Summary of the Known Facts

To follow intelligently the medical side of Spanish influenza, it is necessary for the pharmacist to endeavor to be posted on the general facts relating to the disease and the methods that have been recommended for its control. These have been summarized by the Bureau of Medicine and Surgery, Department of the Navy, as follows:

Infectious Agent—The Bacillus influenza of Pfeiffer.

Sources of Infection—The secretions from the nose, throat, and respiratory passages of cases or carriers.

Incubation period—One to four days—generally two.

Mode of Transmission—By direct contact or indirect contact through the use of handkerchiefs, common towels, cups, mess gear, or other objects contaminated with fresh secretions. Droplet infection plays an important part.

Period of Communicability—As long as the person harbors the causative organism in the respiratory tract.

Methods of Control—(A) The infected individual and his environment.

Recognition of the Disease—By clinical manifestations and bacteriological findings.

Isolation—Bed isolation of infected individuals during the course of the disease. Screens between beds are to be recommended.

Immunization—Vaccines are used with only partial success.

Quarantine—None; impracticable.

Concurrent Disinfection—The discharges from the mouth, throat, nose, and other respiratory passages.

Terminal disinfectant—Thorough cleansing, airing, and sunning. The causative organism is short lived outside of the host.

(B) General Measures—The attendant on the case should wear a gauze mask. During epidemics persons should avoid crowded assemblages, street cars, and the like. Education as regards the danger of promiscuous coughing and spitting. Patients, because of the tendency to the development of broncho-pneumonia, should be treated in well-ventilated, warm rooms.

EDUCATION AND COMMISSIONS

New York Branch Discusses A. Ph. A. Work at Chicago—In Comparison With Other Professions Pharmacists Suffer Because Many Lack High School Graduation

On account of the epidemic of influenza now widespread throughout this city, the attendance at the October meeting of the New York branch of the A. Ph. A. was smaller than on former occasions, but nevertheless the program was interesting, especially the report of Dr. Joseph Diner relative to the work of the parent organization at the recent annual meeting held in Chicago. His allusion to the question of dividing colleges of pharmacy into those teaching professional pharmacy and those giving instruction in commercial pharmacy, as well as dividing the drug stores into corresponding classes, the first class of institutions being designed to furnish men competent to do professional work, as research, etc., developed an interesting discussion. Dr. Diner also gave a very graphic account of the meeting of the Chicago Veteran Druggists Association and the notable speeches that were made by Prof. John Uri Lloyd, Dr. A. R. L. Dohme, and others.

Dr. Diner's report on the educational question was followed with considerable interest, for in the opinion of some present, the status of the pharmacist in the U. S. Army seemed to hang largely upon higher educational qualifications before commissions would or could be issued to pharmacists. Dr. Arny told how the dentists in the army had gained professional recognition by raising the standard of entrance to colleges of dentistry to four years of completed high school work, and this, plus a standardized course in a dental college had enabled the graduate of such an institution to win a commission. All of the officers in the army, he said, are inclined to look askance at anyone who has not had such a general education before seeking a commission, and to a certain extent the officers were probably right. In ordinary times the young man who wishes to become an officer must pass the examination for entrance to West Point and then take the four years technical training in that institution before he gets his commission. In this comparison, many pharmacists would suffer because they have not had four years high school work. Others took part in the discussion, each believing that pharmacy should be given some recognition in the army service.

The Committee on Membership reported that six members had been elected since the last meeting, and the treasurer reported receipts of $313.10, and expenditures of $157.57, leaving a balance on hand of $155.53.

Dr. Hugo H. Schaefer, of the Special Committee on Remington Prize, reported that a fund of $1105 had been collected and turned over to the treasurer of the parent organization, $1000 of this amount being invested in Liberty bonds. There was still in his hands an unexpended balance of $62 with which it was proposed to purchase the dies for the medal to be awarded under the terms of the fund to the pharmacist, man or woman, who had done the most for pharmacy during the preceding year, the recipient to be selected by the past presidents of the A. Ph. A.

Dr. Anderson reporting on the annual meeting of the New York State Association, said that the two important themes discussed were those pertaining to earlier closing and the proposition to raise a fund to donate an ambulance to the United States Service. It was thought that if a law was secured requiring druggists to close at earlier hours, the druggists would soon get the habit of so doing, which would be better all around. He was inclined to oppose such a measure, but on consultation with legal authority he had come to the conclusion that no law could be passed which would prohibit the druggist from making sales at any time he saw fit. However, it was decided to introduce a bill in the legislature this winter. The N. Y. Ph. A. Ambulance proposition has met with a good reception throughout the State and is already an assured success. In connection with the early closing movement, Jeannot Hostmann stated that Charles J. McCloskey, proprietor of one of the most important pharmacies in Jersey City, recently informed him that after having kept his store open all the time for the last eight or ten years, he decided to change his program and open at 8 o'clock A. M. and close at 10 P. M. every day. Mr. McCloskey conformed to this schedule for three weeks only, for the Mayor of Jersey City requested him to keep his store open all the time to meet the present demand for medicines on account of the epidemic of influenza.

Mr. Hostmann reported as a delegate to the meeting of the New Jersey Association, and Dr. C. P. Wimmer reported as a delegate to the meeting of the Connecticut Ph. A.

Announcement was made of the deaths of John A. Dunn, Thomas Latham and John C. Gallagher, all of whom had passed away since the last meeting, Dr. Joseph L. Mayer, Jeannot Hostmann and Secretary Schaefer telling of the interest these men exhibited in pharmacy and the work they had done for the local branch.

Latest advices indicate that 108,000 acres in the Southern States, California, Cuba, Haiti, and Santo Domingo have been planted with castor beans, and the supply of oil, amounting to about 2,000,000 gallons this first year, should be available this autumn. Before the war American medicinal and industrial needs called for about 2,500,000 gallons per year and these were furnished in large part by India which supplied 80 per cent. of the imported oil. Commercially the product was used in the manufacture of soaps, inks, dyes, artificial leather and fly paper.

In co-operation with the War Industries Board chemical experts of the Food Administration recently held a conference at which plans for solving the present acetic acid shortage were discussed. The supply of the acid heretofore considered indispensable in the manufacture of Paris green was taken over some months ago for the manufacture of airplane "dope", the material used for making the cloth on airplane wings weather-proof.

By arrangement with large yeast manufacturers, vinegar, which contains about 10 per cent. acetic acid is now being supplied manufacturers of Paris green. Department of Agriculture experts advise also that lead arsenate and calcium arsenate can be used as substitutes for Paris green in many cases.

Service

The Best Method for Increasing Prescription Dispensing

By **ROBERT P. FISCHELIS** and **HUGO H. SCHAEFER**

Much discussion has been in evidence of late concerning the advisability of curtailing the service extended by retail stores to their patrons. The necessity, as a war measure, of emphasizing economy in the expenditure of both money and man power in all industries has been brought home to the druggist with exceptional force, and the accomplishment of this, in such a way as to exert the minimum effect on business has been the subject of serious consideration at all of the pharmaceutical conventions this year The kind of service that cannot be curtailed if the pharmacist would continue to progress is admirably set forth in this paper, which was awarded the $25 prize for the best paper on "How to Increase Prescription Business" at the 48th annual convention of the New Jersey Pharmaceutical Association.—Editor.

THE prime factor governing the increase of prescription dispensing is undoubtedly service.

The pharmacist who best serves the medical profession through careful, conscientious and up-to-date dispensing will be sought out and patronized even though, as Emerson might have said, he built his shop in the wilderness.

What constitutes the right kind of service to the medical profession and how can it be given most effectively? Pharmacy is the hand maiden of medicine and service to the medical profession implies an expert knowledge of drugs and medical supplies and the ability to apply this knowledge practically to the problems of the day.

First, then, to give proper service the pharmacist must be educated and when we refer to education we include not only the regular college course but he annual post graduate courses, offered to the pharmacist through his State and National Associations. To give the right kind of service, the pharmacist must be up-to-date and a little in advance of the average physician, dentist and veterinarian if possible, in his knowledge of the newer materia medica products. He should attend meetings of medical associations where possible and by all means read at least one medical, dental and veterinary journal. Educating the doctor to depend on the druggist for reliable information regarding drugs is not only practising true pharmacy but it is building business.

No surgeon can be successful without the proper instruments and facilities with which to work and no pharmacist can serve the physician or his community without proper equipment. Under equipment we include first; a stock of reliable drugs, chemicals and biological products, either accurately prepared and standardized by the pharmacist himself or purchased from absolutely reliable sources. The pharmacist who can supply the physician with the things he needs when he needs them, other things being equal, should have no fear of physicians' supply houses or even dispensing doctors. Secondly, under the heading of equipment we should include laboratory facilities. This should embrace apparatus for the more common clinical tests but by all means it must include the necessary apparatus for compounding all common and uncommon prescriptions. In the latter classification we include facilities for filling, ampuls, sterilization, making titrations, isotonic solutions, etc

Many doctors are considered cranks because of their insistence on special kinds of service. These are the men to please, for once they feel satisfied with your service nothing will drive them away from you and they become wonderful assets to your prescription department. Incidentally anyone who can please a crank need have little fear of not pleasing the average man.

Quick service and ability to meet unusual requirements are factors which every doctor appreciates and are producers of confidence. A pharmacist may have the stock, equipment, personality and all the other attributes of a successful prescription dispenser but in order to be successful he must not fail to also adopt modern methods of keeping physicians, dentists and veterinarians informed of the fact that he is in step with the progress of the times. An occasional letter, just as personal as acquaintance with these men permits, is one of the best mediums for keeping in touch with the medical man.

It is very important to bring the professional side of the pharmacy to the front if prescription dispensing is to be increased. Show the medical men that only registered pharmacists compound their prescription in your store; show that you follow directions for storing and preserving the drugs and biological products prescribed. If the medical man is a specialist talk to him about his specialty and demonstrate that you know the requirements of his branch of medicine as far as drugs and other supplies are concerned.

Do not overlook the fact that dentists and veterinarians are also prescribers and that they would be greater prescribers if you kept them informed of the service you are able to render.

Remember that the busy doctor sees many patients each day and you can lighten his burdens by informing him that you have some one competent at hand at all times to receive his prescriptions over the telephone.

Co-operate with him as far as possible in limiting the promiscuous renewal of prescriptions. Give him practical pointers on conservation of supplies in these times of need and offer suggestions to improve his prescribing. Needless to say the two things just mentioned must be done very tactfully or they will defeat their purposes.

Having earned the physician's confidence and respect, you have given a large part of the service which must be provided to increase prescription dispensing.

One thing still remains and that is a realization of the fact that your success is bound up very closely with that of the prescriber and both depend on the service that is rendered to the sick. When you have gotten the prescriber to the point where he sends all his prescriptions to your store, you must bear in mind, that the impression you create on the customer determines the ultimate increase or decrease in your prescription business.

THE QUESTION BOX

The "How to Do It" Department

CONDUCTED BY PHARMACEUTICAL EXPERTS

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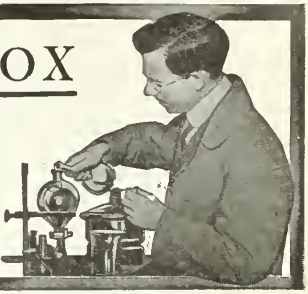


Manufacture of Saccharin

(B. P.)—Saccharin is prepared commercially by different processes, one being the treatment of toluene with concentrated sulphuric acid at 100° C., whereby ortho- and paratoluene sulphonic acids, $C_6H_4(CH_3)$-SO_3H, are formed, which are first converted into calcium salts, and then, by means of sodium carbonate, into sodium salts. From these a mixture of ortho- and paratoluenesulphochlorides, $C_6H_4(CH_3).SO_2Cl$, is obtained by action of phosphorus pentachloride; upon strongly cooling the mixture the para-modification crystallizes out, and is thus separated. Orthotoluenesulphamide, $C_6H_4(CH_3)SO_2NH_2$, is formed from the other isomeric chloride by means of dry ammonia gas. This sulphamide is next oxidized with potassium permanganate, converting it into potassium orthosulphamidobenzoate, one solution of which is freed from precipitated manganese dioxide and decomposed by means of an acid; instead of separating it as free orthosulphamidobenzoic acid, the latter splits up into its anhydride and water. It is this anhydride which is officially recognized under the name "benzosulphinide," but which is very generally known commercially as saccharin, or gluside, B. P.

To what extent the various methods are covered by process patents, we cannot state offhand. The product itself, however, is not so protected. There is no secrecy about any of the processes that have been patented, as the specifications, in order to receive patent protection, are required to be made known. It is also probable that there may be certain "short cuts" as to details of apparatus or manipulation which do not appear in the specifications, but a declaration to this effect is probably not essential to the principles involved. As we understand it, the process outlined above is that most commonly employed and is essentially identical with that evolved by Fahlberg, who discovered saccharin while working under the direction of Dr. Ira Remson at John Hopkins University in 1879 and 1880, and which was shortly after patented.

What Drugs are Imported from Italy

(M. T. F. P.)—It is somewhat difficult to give a complete list of drugs, dyestuffs, chemicals, etc., that have been imported directly from Italy recently, owing to the embargos and the regulations which have been imposed by the various governments incidental to the European war. Since the United States became a belligerent, the Custom authorities have ceased to make public the country of importation, although the value of each article is furnished. However, we find that previous to the present ruling and within the past two years the following articles have been imported from Genoa, Leghorn, Messina, Naples, Palermo and other Italian ports.

Argols, citric and tartaric acids, cuttlefish bone, chillies, couch grass, cumin seed, citrate of lime, curcuma, laurel leaves, licorice root, magnesia, mallow leaves, manna, marigold flowers, mineral waters, mustard, oils of bergamot, fusel, lemon, olive and orange, orris root, paprika, pomegranate root, extract of senna, sesame, St. John's bread, Castile soap, squill root, sweet almonds, talc, crude tartar, juniper berries, saffron, sage and fennel seed. Record is also made of the importation of a number of parcels of pharmaceuticals and medicinal drugs not otherwise enumerated. It should be remembered that while the country named in the import reports is usually the country of origin, there are exceptions, many drugs entering the markets of the world from commercial centers not under the flag of the countries where the drugs were grown or produced.

Converting Saccharin into Soluble Form

(E. D. S.)—For general information as to the manufacture of saccharin, see reply to another query in this department. The only means we can suggest for the utilization of your stock of saccharin is to convert it into the soluble form by neutralizing the saccharin with sodium carbonate, which is practically the method employed for the manufacture of sodium benzosulphinide (soluble saccharin) of the U.S. Pharmacopoeia. Ordinarily it is better for the dealer to purchase the soluble form for most purposes than it is for him to try to convert the insoluble saccharin into the soluble form at the time he wishes to use it. However, this conversion is not a difficult matter, and for most purposes you can make a solution according to the following formula, taken from the former edition of the National Formulary:

Saccharin	256 grains
Sodium bicarbonate	128 grains
Alcohol	2 fl. ounces
Water, enough to make	8 fl. ounces

Dissolve the saccharin and the sodium bicarbonate in 5 fl. ounces water, filter the solution, add the alcohol to the filtrate, and pass enough water through the filter to make 8 fl. ounces. One fl. dram represents 4 grains of saccharin. According to the N.F., this solution is intended to be used for sweetening liquids or solids, when the use of sugar is objectionable, or when a sweet taste is to be imparted to a liquid without increasing its density.

A soluble saccharin in dry form can be made in the same manner by concentrating the solution after neutralization of the so-called insoluble saccharin with sodium bicarbonate, as above, and then crystallizing the salt. For the extemporaneous production of soluble saccharin, suitable for most purposes, a powder may be prepared containing 100 parts of saccharin mixed with 46 parts of sodium bicarbonate. Probably the handiest method, however, is to make a solution like that of the N.F., which can be readily mixed with almost any combination that may be desired. It is possible that the bitter taste to which you refer may be due to incomplete neutralization of the saccharin with the sodium bicarbonate or carbonate. The amount of saccharin needed to produce the "sweetness" desired when added to a given mixture, is largely a question of taste and must be worked out by experiment.

Preparing a Tooth Paste

(M. S. W.)—As you do not state in what particular the formulas are unsatisfactory, we are left somewhat in the dark, unless a hint may be conveyed in your expression "unworkable." However, in an effort to help you out we submit the following formula for a tooth paste which has been recommended by H. C. Blair, of Philadelphia, as "reliable":

Soft soap, 1 ounce; glycerin, 8 ounces; starch, ½ ounce; water, ½ ounce; precipitated chalk, 8 ounces; oil of peppermint, ½ ounce; coloring sufficient. A glycerite of starch is prepared with the starch, glycerin and water, the soap added, and, with the coloring and flavoring, rubbed into a homogeneous mass. The precipitated chalk, after bolting through a No. 14 bolting cloth sieve, is then added, and the whole worked into a smooth paste, which is conveniently filled into tubes by the aid of a sausage stuffer. Obviously, the flavoring may be changed for some other, and the coloring may be omitted. A good coloring is carmine solution. When mixing large quantities, a mechanical contrivance, such as a bread mixer or putty machine, can be used with advantage.

Tests for Papain

(J. H. M.)—Considerable information concerning papain is to be found in the various annual volumes of the Proceedings of the American Pharmaceutical Association. There is nothing, however, that can be construed as outlining any definite tests for this vegetable enzyme used as a digestive agent. The following information, taken from the British Pharmaceutical Codex (London, 1911), we think contains most of the points raised in your question:

The impure enzyme (papain) is usually obtained by adding to the freshly drawn milky juice twice its bulk of alcohol, the precipitate formed being drained and dried. By dissolving this crude papain in water, and re-precipitating with alcohol, it is obtained as a light-colored product. The color is to some extent indicative of its quality, as generally the lighter the color the more active the preparation. Papain occurs as an amorphous or slightly granular powder, varying in color from white to light brown, very liable to change, odorless, when prepared as above, and having a faint pepsin-like taste. It possesses a solvent action on animal protein, and acts in acid, alkaline, or neutral media. The activity of the enzyme, though checked in the presence of alcohol, is less susceptible to destruction by such anti-zymotics as glycerin, phenol, salicylic acid, etc., than is pepsin; indeed they have been used as preservatives. Its proteolytic action is similar to that of pepsin in producing peptones from albumin or fibrin.

It is most active when working in relatively small quantity of liquid, dilution of the digestive solution having a very marked retarding influence on the progress of hydrolysis. For the determination of its digestive power blood fibrin in slightly alkaline solution is mostly used, and the digestion carried on at a temperature of about 45° to 50°C. A good sample should dissolve 200 to 250 times its weight of blood fibrin in four to five hours. The activity of papain in solution is destroyed at about 82°C.; in the dry state, however, it is much more stable, and may be heated to 100° C. without being destroyed. It is stated that a solution of 2 decigrams in 4 mils of water with 1 mil of nitric acid (sp. gr. 1.153), filtered, after standing 1 hour, should not be rendered turbid by a solution of tannin (5 per cent.).

An article on the "Commercial Standardization of Papain" may also be found in the "American Journal of Pharmacy," 1914, 86, 543; this paper describes the reagents and methods recommended by the authors F. W. Heyl, C. R. Cary and J. F. Staley for determining the digestive power of various samples of papain, etc. This paper is the latest published contribution on this product that we can recall.

Solubility of Saccharin

(X. Y. Z.)—Writes: "I make a palatable castor oil, using saccharin, 20 grains, alcohol, 1½ ounces, aromatics and castor oil enough to make 32 ounces. I buy ————'s 'soluble saccharin', but for the last year have been unable to dissolve it. I have written them twice, but have received no satisfaction. Can you suggest the cause and a remedy?"

Our plan would be to test the saccharin according to the solubility test described in the Pharmacopoeia, which requires that 1 gram of soluble saccharin shall dissolve in about 50 mils of alcohol at 25° C. If the soluble saccharin does not dissolve in the volume of alcohol named, you can rightly question the solubility of the product furnished. If the saccharin is soluble, then you should dissolve the soluble saccharin and the aromatics in the alcohol, seeing that perfect solution is effected before adding the solution to the castor oil. In the National Formulary formula for "aromatic castor oil," benzosulphinide or saccharin (not sodium benzosulphinide, soluble saccharin, U. S. P.), is employed, the aromatics being oils of cinnamon and cloves, vanillin and coumarin, all of which with the benzosulphinide are directed to be dissolved in the alcohol, added to the castor oil and mixed thoroughly.

The British Pharmaceutical Codex recommends a somewhat different formula for aromatic castor oil, amyl acetate and absolute alcohol being the solvents employed. Thus, mix 10 minims of amyl acetate and 20 grains of saccharin (benzosulphinide) with 1 fl. ounce of alcohol, and set aside until a clear solution is obtained; then add enough castor oil to make 20 fluid ounces. It is directed that the preparation should be stored in filled and dry bottles. Some other information relating to saccharin appears elsewhere in this department, which see.

Uses of Butyric and Propionic Acids

(C. S. D.)—Butyric acid is used for the manufacture of butyrates, particularly the technically important esters. Among the butyrates of the metals occasionally found listed are those of calcium, copper (used sometimes as a reagent for essential oils), lead, magnesium, and sodium, the uses of which are apparently limited. The organic compounds (esters) are of more importance, ethyl butyrate being somewhat employed as a solvent for pyroxylin in place of amyl acetate. Ethyl butyrate is also used in the preparation of pineapple flavors, etc. Amyl butyrate (isoamyl butyric ester) is similarly employed as a flavor, as for liqueurs, confectionery and the like.

Propionic acid is stated by various authorities to be relatively of small importance except for its use in synthetic chemistry to build up a variety of products. Propionates of calcium, magnesium, manganese, potassium and sodium have been suggested for medicinal use, we believe, but so far as medical practice in this country is concerned, their employment is practically nil. The esters of propionic acid, like the esters of butyric acid, find some use in synthesis and as solvents, ethyl propionate being recommended as a solvent for soluble cotton.

The Progress of Pharmacy

Charcoal Needed for Gas Masks—

Charcoal has the property of absorbing many gases and coloring matters, and for this reason it has long been used for disinfecting and decolorizing purposes. A knowledge of these uses early suggested its employment in the manufacture of gas masks which are now worn by all soldiers fighting in the European war. It has been found that charcoal made from certain kinds of fruit stones and the shells of certain nuts, produces the best kind of charcoal for this purpose, and the Gas Defense Division of the War Department is now asking the co-operation of commercial organizations and business houses in getting the united effort of all communities in collecting adequate quantities of these materials. The fruit stones and nut shells wanted are peach stones, the pits of the apricot, prune, plum, olive and cherry, date seeds and Brazil nut shells, as also the shells of hickory nuts, walnuts and butternuts. Because charcoal made from other shells or pits is inferior, other shells or pits must not be mingled with those enumerated in the list. Local organizations of the Red Cross have charge of collecting the above materials in every community.

Examination of Storax—

Van Itallie and Lemkes reporting on the examination of nine samples of storax state that the determination of the cinnamic acid content is preferred to the acid or saponification values; the acid occurs in storax in the free state and as cinnamyl, phenylpropyl, ethyl, and ricinoleic esters. The free cinnamic acid cannot be determined from the acid value, which includes acids insoluble in water; moreover, if hydrolysis occurs, a high acid value results. Titration of the aqueous extract with alkali gives a much lower content of cinnamic acid than the following bromine method, which is recommended by the authors; 1 Gm. of the sample is boiled with 20 Cc. of N/2 alcoholic potassium hydroxide for one hour under a reflux condenser, the mixture distilled on a waterbath, and the residue dissolved in 25 Cc. of water. The solution is extracted with 20 Cc. of ether, and the aqueous layer, together with two 5 Cc. portions of water used for washing the ether layer, diluted to about 950 Cc., treated with 10 Cc. of dilute sulphuric acid, made up to 1000 Cc., and filtered. 100 Cc. of the filtrate are treated with 10 Cc. of N/10 potassium bromate, 1 Gm. of potassium bromide, and 5 Cc. of sulphuric acid; after 15 minutes, 1 Gm. of potassium iodide is added, and then, after a further 5 minutes, the liberated iodine is titrated with thiosulphate; 1 Cc. of N/10 potassium bromate is equivalent to 7.4 milligrams of cinnamic acid (*Pharm. Weekblad* through *Jour. Soc. Chem. Ind.*).

Eggs Preserved in Waterglass—

Answering an inquiry the Editor of *Pharm. Journal*, London, states that when eggs are taken out of the waterglass solution in which they are immersed for preservation, they should be used at once. It is impossible to say how long the eggs will keep good when removed from the liquid—not much, if any longer than untreated eggs. The object of egg preservatives is to prevent the ingress of bacteria to the substance of the egg, and if the waterglass were allowed to dry on the shell, the resulting varnish or coating might be very effective, but it is impossible to be sure of the absence of flaws in the surface. Hence it is better in this case that the eggs should be completely immersed in the liquid. The "varnish" idea has been used satisfactorily in practice, by wrapping the eggs in any soft textile material soaked in silicate solution, and allowed to dry for twelve hours in a well ventilated place. A hard stony mass is thus formed around the shell, and the egg will stand rough handling. Or the eggs may be covered with a paste made with silicate solution and fine sawdust, or with cotton wool soaked in the liquid. Before use the eggs are soaked in water, which dissolves the silicate, and the wrapping is then easily removed. Eggs preserved in this way, it is stated, have been packed for transport to prisoners of war, and they keep fresh for a month.

Substitute for Medicated Cotton—

Peat produced by the decomposition of sphagnum moss is so antiseptic and absorbent that it may be used as a dressing for wounds, and is an excellent substitute for medicated cotton (*Coal Age.*) This fact has been recognized for some time in Europe, where sphagnum moss is now extensively used in preparing surgical dressings. According to Prof. Soper, there are large tracts of sphagnum bog in the northern counties of Minnesota, Wisconsin and Michigan, also in Maine, and some is found in New York and Pennsylvania. No deep excavation would be necessary, for immense quantities of sphagnum can be taken from the upper parts of the deposits.

Identification of Guaiacol Carbonate—

Maue proposes the following test for the identification of guaiacol carbonate: About 0.02 Gm. of the sample is dissolved in 1 Cc. of alcohol, 2 drops of ferric chloride solution and 1 drop of formaldehyde solution are added, and the mixture is poured on the surface of 2 Cc. of sulphuric acid; a cherry-red coloration, due to the presence of guaiacol, develops at the junction of the two liquids. Ordinary ether usually contains aldehydes and the latter invariably include formaldehyde, which is essential to the above reaction; consequently, when ordinary ether is substituted for the alcohol in the above test a positive reaction is obtained. Pure ether, such as is used for anesthetic purposes and which must be free from aldehydes, does not give a coloration with the test. The sensitiveness of the reaction is about 1:300,000. (*Pharm. Zeit.*, through *Jour. Soc. Chem. Ind.*)

Patchouli Production in Malaya—

Patchouli is both a wild and a cultivated crop in the Malay Peninsula, according to a recent report furnished to the Penang consulate by the Director of Agriculture for the Federated Malay States. The plant is a short leaved herb from 2 to 3 feet high, much branched, with square stems, emitting when rubbed the characteristic smell of patchouli. The best method of propagation is by cuttings of young shoots. These are cut about 3 inches long, care being taken to cut just below a joint. The cuttings are then pricked into nursery beds well watered and shaded. In three weeks to a month they will have rooted and can be removed to the permanent beds, where they should be shaded until thoroughly established. The plant grows well in open sun, but it will also stand a little shade and may be grown as a catch crop in young rubber or coconut clearings. The cuttings may be planted at distances of about 2 feet. The first crop can be cut six months after planting and afterwards twice a year. In Perak it is usual to take only three crops and then replant. The leaves when cut out may be dried in the sun, but it is better to dry them in the shade, spreading them out in a cool and airy shed. When quite dry (about one week) they may be packed in bales.

One picul (133⅓ pounds) on the leaf dried just as it is cut yields from 24 to 30 ounces of essential oil, and a sample free from the heavier stalks yields about double that amount. Thirty-six pounds of green leaves produce 10 pounds of patchouli. One-twentieth of an acre planted by Curtis gave 449 pounds of green stuff, and after 10 days it had dried to 106 pounds, which on picking over gave 69 pounds good leaf and 37 pounds refuse. The dried leaf is exported principally to Marseilles and New York. Exports from Penang for 1916 were almost exclusively to New York and amounted to about 65 tons. The exports of patchouli leaves from Penang to the United States during 1917 totaled 79,979 pounds, valued at $12,252 gold.

Benzyl Alcohol as a Local Anesthetic—

Benzyl alcohol or phen-methylol has been recently proposed as a local anesthetic for use in surgical operations. Macht, reporting his studies on a series of clinical cases in which weak solutions of benzyl alcohol were administered, concludes that the anesthetic efficiency, the low toxicity, the simple excretion of the drug by the organism, and the ease with which benzyl alcohol solutions can be sterilized, will render it a useful therapeutic agent in medicine and surgery.

Origin of the Name "Nux Vomica"—

After an exhaustive investigation Tschirch comes to the conclusion that this name was first given to the seeds and fruits of *Strychnos potatorum,* which contain no alkaloid, but possesses emetic properties; they are far more extensively used in India, and have been known much longer than the seeds of *S. Nux Vomica.* No indication could be found of any emetic property being attributed to the latter, and the assumption is that after their introduction the *S. potatorum* gradually disappeared, and the name "Nux Vomica" was transferred to those which now bear it. Schelenz, however, points out that the adjective "vomica" is not derivable from "vomo," and that vomica means a boil (and also misfortune or injury), to which the seeds of *S. Nux vomica* have some resemblance (*Schweiz. Apoth. Ztg.,* through *Pharm. Journ.*)

Color Test for Wheat Flour—

According to Calendoli, if a pinch of wheat flour be added to a little concentrated hydrochloric acid, the color of the fluid changes to violet in proportion to the freedom of the sample from bran particles and of flour from other grains. The change of tint is complete in from one or two hours and persists unmodified for twenty-four hours. Other flours and bran change the tint to brown (*Journ. A. M. A.*).

Dressing for Fabrics—

To render fabrics suitable for receiving water and oil paintings, photographic paintings, etc., a dressing is applied consisting of 1 ounce of gelatin dissolved in 10 fluid ounces of water, to which when heated to 100° F., 2 ounces of kaolin are added. After thorough mixing, 6 drams of glycerin and 10 grains of formaldehyde (40%) are added. The solution is applied with a brush to fabric at a temperature of 80-100° F. The process is protected by British patent No. 117,640.

Camphor in the Treatment of Influenza—

Judging by the large number of communications printed in the metropolitan newspapers, general interest is centered in the use of camphor in the treatment of the so-called Spanish influenza. The spirit of camphor is usually the preparation employed, the patient being directed to take 10 drops in water, preferably hot, at one dose, as a cure for the cold in the incipient or sneezing stage. The inhalation of spirit of camphor is also recommended as an influenza preventive, some preferring the inhalation of fumes of burning camphor, a small quantity of the camphor about the size of a dime being placed in a small metal jar and ignited, the patient inhaling the fumes for only a few seconds through one nostril at a time. The inhalation is repeated four or five times. Just how much value is attached to this form of medication has not been stated by medical authority, although camphor has been used with benefit in the past in coryza, acute bronchitis and other affections of the respiratory tract.

Cinchona Cultivation in the Philippines—

Consular advices report that the cultivation of cinchona plants is being attempted by the Igorot Exchange, a missionary institution at Sagada, Island of Luzon. The director of the Bureau of Science, Manila, states that the cultivation of cinchona in the Philippines had not been attempted before, but that he was of the opinion the climate and soil conditions of the mountain province in which Sagada is situated are entirely adapted to this culture. The experiment is made possible by the courtesy of the deputy director of agriculture of Ootacamund, Madras presidency, who furnished about 10 ounces of *Cinchona ledgeriana* seed for the purpose.

Determination of Atropine—

According to Rasmussen, atropine and its isomerides may be accurately determined by silico-tungstic acid. The belladonna leaves or extract are treated with ammonia and extracted with ether, the ether extracted with dilute hydrochloric acid, and excess of silico-tungstic acid added. After standing for about eight hours the precipitate is collected on a Gooch crucible, washed with 1 per cent hydrochloric acid, ignited and weighed. The weight of the inorganic residue multiplied by 0.4067 gives the weight of the atropine, to which a correction of 0.0054 for every 100 Cc. of solution and washings must be added. The results are in close agreement with the calculations (*Chemist and Druggist*).

U. S. Standard Blue-Black Ink—

Pure dry tannic acid	23.4 grams
Gallic acid, in crystals	7.7 grams
Ferrous sulphate	30 grams
Dilute hydrochloric acid, U. S. P.	25 grams
Carbolic acid	1 gram
Bavarian blue dye (Schultz and Julius No. 478)	2.2 grams
Distilled water to make	1000 Cc.

Dissolve the tannic and gallic acids together in about 50 Cc. of warm water and allow to cool; dissolve the ferrous sulphate in about 150 Cc. cold water. Add the hydrochloric acid to the ferrous sulphate and immediately mix the solutions. Add the dye dissolved in water and the carbolic acid and make up with distilled water to 1,000 Cc. Mix thoroughly. (*Chemist and Druggist*).

Cellulon—

Cellulon is a new German textile substitute product made from pulp, but as a rule without the addition of resin glue. The liquid pulp is not rolled on the regular machines, but is worked in a round drainer, where part of the water is taken away and the more solid mass which is left is divided into strips, which in a wet condition are taken to the spinning machines. In this wise a yarn is obtained somewhat better than the paper yarn, but still not fitted for anything but coarse fabrics.

New Books for Pharmacists

ESSENTIALS OF MODERN CHEMISTRY. By Charles F. Dull. South Side High School, Newark, N. J. 12 mo., ix + 458 pages, cloth, $1.40. New York, Henry Holt & Co.

This is one of the best of the recent text books on chemistry that have come to our attention. The author has aimed to make the exposition of the subject practical and to show the relation of chemistry to daily life without neglecting the fundamental principles upon which the subject is based. Further, he reflects the growing interest in chemistry in this country. There can be no question but that the average student has awakened to the necessity of a working knowledge of chemistry and its fundamental laws, for he knows that an army of skilled workers so equipped is needed for munition plants, textile and paper mills, in the manufacture of sulphuric and nitric acids, and in the industrial fields generally. This book, if intelligently studied, is sure to furnish the student with the necessary facts to comprehend the fundamental principles of many industrial processes and their relation to chemistry.

Thus, the relation of chemistry to water purification, fuels and illuminants, agriculture, paints and varnishes, textiles, paper, etc., is especially emphasized. To fix the facts in the mind of the student, appropriate questions are appended at the end of each chapter. The chapters on the atomic theory, equivalent and molecular weights, valence and equations have been grouped, and concisely treated, sufficient explanation being incorporated, however, to give the student a clear conception of the underlying principles as a whole. Short sketches and the portraits of twelve eminent chemists appear in the book, only one of the number selected for this treatment being a German, a fact which further tends to confirm the present belief that not all of the great chemists of the world have been Huns. The single German whose name appears in this galaxy of worthies is Bunsen, noted for his discovery of spectrum analysis, and as the inventor of many laboratory devices.

JAMES WOODHOUSE, A PIONEER IN CHEMISTRY, 1770-1809. By Edgar F. Smith, provost of the University of Pennsylvania. 12 mo., 299 pages, cloth. Philadelphia, John C. Winston Company.

Prof. Smith has done a great service to American chemists in preparing this biographical sketch of one of the earliest pioneers of the science in this country, and with the main facts in the career of the distinguished subject as here presented before us, we can well believe that the life story of James Woodhouse constitutes a very definite chapter in the development of chemistry in the United States. He was born at Philadelphia on November 17, 1770, graduating from the University of Pennsylvania in 1787; three years later the Master's degree was conferred upon him in course. He became a student of Dr. Benjamin Rush, one of the signers of the Declaration of Independence and one whose reputation and position in the medical world at that time were beyond dispute. The influence of this great man upon Woodhouse caused the latter to become a student of medicine and later, a surgeon in the United States Army. During his military career Woodhouse kept up a correspondence with his friend and preceptor, and a number of these letters are reproduced in the sketch before us, giving, as they do, evidence of the writer's keen desire to learn everything possible of things pertaining to his profession.

On July 7, 1795, he was elected professor of chemistry in the University of Pennsylvania, and died in 1809. To quote the words of the biographer, "he entered upon this career with meagre preparation and equipment, judged by present day standards, but by steadfast application he gradually grew in power, until his keenest critics were quite ready to acknowledge him as leader and defer to him all questions pertaining to chemistry. Let the American field be viewed from any standpoint, and there appears as the outstanding chemical figure for a decade more or less in that now far-away period, but one person—James Woodhouse, a genuine pioneer in establishing correct ideas on combustion, respiration, and also the composition and decomposition of water." Woodhouse was, further, a pioneer in plant chemistry; in the isolation of at least one metal from its hydroxide; in laboratory experimentation; in chemical analysis; in the elaboration of industrial chemical processes, and in chemical research. His administrative ability was attested by service as dean of the Medical School of the University of Pennsylvania, but he "wrought so well in laying the foundations of chemistry in this broad land," that he "was, beyond dispute, a worthy member of the noble guild of American chemists."

OPTICS FOR PHOTOGRAPHERS. By Hans Harting, Ph.D. Translated by Frank E. Fraprie, S.M., F.R.P.S., editor of American Photography. 12 mo., 224 pages, cloth, $2. Boston, American Photographic Publishing Co.

The writer of this book starts with the fundamental laws of the propagation of light, and carefully and logically carries the reader through the principles of geometrical optics to a complete explanation of all types of photographic lenses, and a description of their qualities and defects. Beginning with a discussion of the sources and propagation of light, the reader is carried along to the pinhole camera, the refraction and reflection of light, lenses, and the actual realization of optical image formation. Then is given a description of the principal types of lenses, both astigmats and anastigmats, a discussion of reflection and absorption in photographic lenses, concluding with a chapter giving rules and facts of importance to photographers and which depend on the principles enunciated in the preceding portions of the book. As a scientific exposition of fundamental laws on which the art of photography is based, the book will commend itself to the everyday user of a camera.

STUDIES ON SOLUTION IN ITS RELATION TO LIGHT ABSORPTION, CONDUCTIVITY, VISCOSITY, AND HYDROLYSIS. A report upon a number of experimental investigations carried out in the laboratory of the late Professor Harry C. Jones. Compiled by Paul B. Davis. 8vo., 144 pages, paper, $2. Publication No. 260. Carnegie Institution of Washington.

The several chapters comprising this report represent the various lines of investigation pursued under the direction of the late Professor Harry C. Jones during the year 1915-16 and in the case of the work of Davis and Johnson, continued in 1916-17. Although somewhat diverse in nature, they all bear directly or indirectly upon the conception of solution in general and of solvation in particular which have been developed in the laboratory of Prof. Jones during the past fifteen years.

In this report appear the results of the work of Dr. Hulburt and Dr. Johnson, who have measured the absorption coefficient of solutions of a number of salts in different solvents for monochromatic radiation. They have calculated from this the molecular absorption coefficient for such solutions and have made a careful comparative study of the molecular absorption-concentration curves. There is also a report of the investigation of formamid as a solvent, begun by Davis and Putnam, and continued by Drs. Davis and Johnson. In addition to observing the behavior of a series of nitrates and formates in this solvent, they have determined the conductivity and viscosity of solutions of a number of salts of the organic acids and a study of several representative salts in mixtures of formamid with ethyl alcohol. There are some observations on the viscosity of caesium salts in binary mixtures of glycerol and formamid with water, by Dr. Davis, and a study of the conductivities of the sodium salts of a number of organic acids by Drs. Lloyd and Pardee, the authors applying the formula of Noyes and Johnston for aqueous solutions to the calculation of dissociation in ethyl alcohol; a completion of his study of the relative dissociating power of free and semi-combined water by Dr. Ordeman, and an investigation of the different chemical activity of free and semi-combined water by Dr. Connolly. The results recorded in this volume have all been carried out by the aid of the grants from the Carnegie Institution of Washington.

GUMS AND RESINS. By Ernest J. Parry, B.Sc., F.I.C., F.C.S. Crown 8vo., 106 pages, cloth, 85 cents. London and New York. Sir Isaac Pitman & Sons, Ltd.

Accurate information on specific or classified subjects possesses the double merit of reliability and convenience. To the busy man this is a decided advantage which he is quick to appreciate. In the little volume under discussion, one of a series on common commodities and industries issued by Pitmans, the author has gathered together data concerning the principal bodies known as resins, gums, and gum resins in a convenient form for reference. The necessary chemical information has been kept down to its simplest forms, and only the more important substances which possess special interest have been treated. The book is divided into four chapters, in which the various classes of substances are discussed as follows: 1, the true or proper resins; 2, the gum resins; 3, balsams, medicinal resins, etc., and 4, the true gums. The distinguishing characteristics, source of supply and other data relating to the various kinds of these substances are given. The book is illustrated.

PRINCIPLES OF CHEMISTRY. By Joel H. Hildebrand, Ph.D., captain, Ord. O. R. C., detailed to Chemical Service Section. N. A., associate professor of chemistry in the University of California. 12 mo., 313 pages, cloth, $1.75. New York, The Macmillan Company.

This book differs from most text books in that the arrangement is such that the various chapters can be adapted to any scheme the instructor may elect to follow in his class work. In many works on chemistry, a topic like the mass law, for example, is introduced in a chapter headed Sulfur, and must remain there if the illustrations are to be of any value, whereas, of course, this principle belongs no more under sulfur than it does under any other element, and the instructor using the book may wish to introduce it at some totally different place. In the book before us, the material has been arranged so that a considerable departure from the given order is possible without loss of intelligibility in any general arrangement of presentation by the teacher. In this separate treatment of principles, the author has followed the modern trend of teaching and exposition which is on the assumption that progress in both pure science and industry is becoming constantly more dependent upon ability to predict new facts by the aid of general principles rather than upon a knowledge of existing facts.

The "principles" discussed appear under the following chapter headings: Kinds of matter; the gas laws and the kinetic theory; weight relations in chemical reactions; atomic theory; volume of gases, molecular weights; types of chemical compounds; valence, writing equations; chemical nomenclature; quantitative relations involving solutions of known concentration; thermochemistry; behavior of substances dissolved in water, ionic theory; the speed of chemical reactions; chemical equilibrium, the effect of concentration; properties which may effect concentration; chemical equilibrium, the effect of pressure and temperature; oxidation and reduction; periodic system; the constitution of the atom; dispersed systems. At the end of each chapter exercises relating to the particular subject covered appear, as also questions for the student to answer.

DRUG ADDICTS IN THE ARMY

A special committee of the Treasury has been investigating the drug habit among soldiers and civilians and reports that thousands of drafted men have been dismissed from military camps after it was found they were drug addicts, and that this number included many who systematically developed the habit after being drafted in order to insure their dismissal. This condition is one reason given for the urgency of immediate remedial legislation.

Hundreds of agents of the Internal Revenue Bureau, acting for the investigating committee, have reported detailed information concerning consumption of morphine, cocaine, heroin, or medicines containing similar alkaloids, and on these reports is based the estimate that at least 1,500,000 persons in the United States are drug addicts, of whom 1,000,000 are known as such in their communities, and the balance are secret drug users. Full reports are expected to show 200,000 known users within the former draft ages of 21 and 31 in New York alone.

Partial reports show the following addicts reported by physicians under treatment in States, with numbers to be doubled and tripled probably by later reports:

Alabama, 739; Arkansas, 1,250; Colorado, 584; Connecticut, 968; Delaware, 166; Florida, 882; Georgia, 2,242; Idaho, 7; Illinois, 1,197; Indiana, 1,536; Kansas, 1,485; Kentucky, 1,692; Louisiana, 1,110; Maine, 427; Maryland, 1,062; Massachusetts, 2,238; Michigan, 2,745; Minnesota, 1,249; Mississippi, 307; Missouri, 3,272; Montana, 16; Nebraska, 339; New Hampshire, 1,363; New Jersey, 2,274; New Mexico, 698; North Carolina, 2,211; North Dakota, 153; Rhode Island, 548; South Dakota, 175; Utah, 35; Wyoming, 60, and District of Columbia, 443. In New York City 8,000 already have been tabulated.

TESTING DRUGS FOR ARMY

Drugs and medicines used by the army medical corps are being tested by the Bureau of Chemistry of the United States Department of Agriculture at headquarters in Washington and at its offices in various cities. Several chemists have gone from the bureau to accept commissions in the army and perform the work directly for the War Department. Chemists and inspectors are being instructed for army and navy work and special investigations are being conducted on problems concerning foods, leather, fabrics, paper, and other products in military and naval demand.

The Retail Druggists' Association of San Francisco, Cal. held its annual meeting recently and chose officers as follows: President, J. M. Stanton, of the Boulevard Pharmacy, 1498 Fulton street; vice-president, G. L. Robinson; secretary-treasurer, N. Schwartz; executive committee, L. Mendelson, K. B. Bowerman, Dr. Charles M. Troppman, L. Harris, W. Quinn, A. A. King and J. M. Casselman; legislative committee, D. R. Rees, N. Schwartz and W. Gnerich.

DRUG TRADE ROLL of HONOR

To honor the men of Pharmacy serving in the war against Autocracy the ERA wants to publish a complete roster. Send full particulars to 3 Park Place, New York.

LIEUT. GOFF IN THE MEDICAL SERVICE

Lieutenant Walter S. Goff, son of Walter B. Goff, for many years proprietor of one of the leading drug stores of Rutherford, N. J., whose portrait appears herewith, is one of the very few young men with previous drug store training who have risen from the ranks to a commission in the Medical Supply Department of the Army. He enlisted as a first class private on December 15 last, and was assigned to duty in New York. Early realizing the opportunities the service offered, he immediately began to prepare himself for advancement, with the result that he has been promoted through the various grades to a lieutenancy, receiving his commission in July last. He is attached to headquarters, Washington, but has been on detached service in the East for some months. Lieutenant Goff received his education in the Rutherford high school, clerking in the meantime in his father's store. This training and subsequent experience with Becton, Dickinson & Co., manufacturers of surgical specialties, East Rutherford, N. J., has had much to do with his rapid promotion in the service. He is about 24 years of age.

Lieut. Walter S. Goff

PHARMACISTS IN CHEMICAL SERVICE

Editor, Pharmaceutical Era:

Recently a copy of The Pharmaceutical Era—such a familiar journal to us—fell in our hands here in camp. We found much interesting news in it regarding our profession. We also found out that the journal is printing a list of the men connected with the trade now serving the U. S. A.

We both are Boston boys, graduates of the Massachusetts College of Pharmacy, and now in the Chemical Warfare Service at the Edgewood arsenal, Edgewood, Md., doing our utmost to help our Uncle Sam. Our work here is chiefly of an analytical character, and we find it very interesting.

Yours respectfully,
George Gakidis, Ph. G.,
Co. L. 3rd Chem. Battalion,
Paul Mondello, Ph. G.,
Co. M 3rd Chem. Battalion,
Edgewood, Md.

PHARMACIST MADE ASSISTANT SURGEON

Isaac Newton Hurd of Brookline, Mass., retired pharmacist, who has been again doing active service at the Naval Medical office, Little Building, Boston, has been commissioned an assistant surgeon on the active list of the Medical Corps, U. S. N., with the rank of senior lieutenant. He was pharmacist in charge of the dispensary at the Charlestown Navy Yard in 1900-1, just before he was retired because of physical disability incurred from continuous service in the Philippines. He joined the Navy in 1886, having been appointed to the old civilian rate of apothecary and he served as such in this country and around the world in that position before the new law establishing the warrant and commissioned ranks of pharmacist and chief pharmacist was passed. He was made a pharmacist with the passage of the law.

DR. LUCIUS P. BROWN NOW A CAPTAIN

Dr. Lucius P. Brown, director of the Bureau of Foods and Drugs of the Health Department, New York city, for the past three years, and who was recently tried on charges of inefficiency and improper conduct of his office and acquitted, has accepted a commission as captain in the Sanitary Corps of the Medical Department of the Army, and will serve in the Division of Food and Nutrition. The Department of Health has granted him a leave of absence. Dr. Brown is a well-known authority on food and drug standards, having served as president of the Association of Dairy, Food and Drug Officials of the United States, and for a number of years held the office of State Food and Drug Commission in Tennessee.

GLAD TO SERVE IN KHAKI

Private Stephen M. Baloga, formerly soda fountain manager for W. D. White & Co., Wilkes-Barre, Pa., now serving in the Motor Transportation Co. at Training Camp 11 at Camp Johnston, Florida, writes interestingly of life in the service. He says:

"I like it very much, and although I gave up a good position I am glad to serve in a khaki uniform while this war is on."

Mr. Baloga is at present a private, but expects promotion soon.

WOUNDED IN FRANCE

John Lanouette, proprietor of the Franklin drug store, corner of Blue Hill avenue and Georgia street, Roxbury, Mass., has received word that his son, Lieutenant Kenneth H. Lanouette has been seriously wounded in France. Lieutenant Lanouette is a graduate of Harvard, class of '20.

OTTO C. F. LIPPERT, son of Druggist Otto H. G. Lippert, Cincinnati, O.; second lieutenant, Ordnance Corps, United States Proving Plant, Aberdeen, N. J.

OWEN MURPHY, Jr., with A. C. Williams, 1603 W. 63rd St., Chicago; corporal Headquarters Troop, 33rd Division U .S. A., now in France.

MORRIS MARK, druggist, Court and Cutter sts., Cincinnati, O.; U. S. Navy, in charge of dispensary Aviation Camp near Great Lakes Training Station, Chicago.

WALTER STEIGER, with Druggist Milton Franken, Cincinnati, O.; officers' training school, Camp Gordon, Ga.

J. A. SEEMAN, graduate of U. W. School of Pharmacy, traveller for the K. C. Pharmacy, Kansas City, Mo.; 1st class sergeant, Base Hospital No. 46, A. E. F.

WM. MILLER, Boscobel, Wis., formerly drug clerk with Melter Drug Co., and Seeman Pharmacy, Boscobel; and with Rex Drug Co., Salt Lake City, and the Central Drug Store, Joliet, Ill.; in service with No. 20 Evacuation Hospital, A. E. F.

CAESAR F. PARENTINI, pharmacist, 611 Paterson ave., West Hoboken, N. J., sergeant Medical Corps, Inf. No. 1, 4th Battalion, 155 Depot Brigade, Camp Dix, Wrightstown, N. J.

R. A. IKERD, clerk for the Wakeland Pharmacy, Kiowa, Kansas; private, Co. A, 125th Machine Gun Battalion, France.

FRANK W. SZAJEK, formerly drug clerk, 12th and Crawford streets, Chicago, Ill.; private, Co. I., 5th Infantry, Pioneer, Camp Wadsworth, S. C.

GEO. GAKIDIS, Ph. G. (M. C. P. '15), 5652 Fremont st., Boston, Mass.; Co. L, 3rd Chemical Battalion, Edgewood, Md.

PAUL MONDELLO, Ph. G. (M. C. P. '17), 7 Rockland st., Dedham, Mass.; Co. M, 3rd Chemical Battalion, Edgewood, Md.

HAROLD F. EVANS, son of George B. Evans, head of the Evans' pharmacies, Philadelphia; lieutenant, American Flying Forces, in France.

WILLIAM NOVAK, Sargent's Drug Store, Chicago, Ill.; private, Casual Detachment, Camp Talliaferro, San Diego, Cal.

THADDEUS MECLEWSKI, 2031 Armitage ave., with Sargent's Drug Store, Chicago; private, U. S. A., in France.

JAS. E. MELVIN, 1431 Thome ave., Chicago, formerly with Sargent's Drug Store; private, U. S. A., present address not known.

CHARLES GREEN, 1220 Arthington st., Chicago, with Sargent's Drug Store; private, Medical Department, Camp Green, Rockford, Ill.

VICTOR E. TONNESON, 323 N. Keeler st., Chicago; with Sargent's Drug Store; U. S. Navy, Municipal Pier, Chicago, Ill.

ELMER J. JOHNSON, 5009 N. Hermitage ave., Chicago, with Sargent's Drug Store; sergeant, Base Hospital No. 14, APO 780, in France.

M. J. WILKINSON, druggist at Riverside, Iowa; U. S. A., Camp Pike.

WILL P. IDEN, clerk, Union Drug Store, Tonapah, Nev.; U. S. Navy.

ELWOOD D. ANDERSON, with Anderson Drug Co., Ephraim, Utah; corporal, 157th Infantry, Camp Lewis, Wash.

THOMAS V. MALONEY, druggist, Salt Lake City, Utah; officers' Training School, Camp Pike.

KARL MARCUS ASMAN, 111 E. Pennsylvania st., Evansville, Ind.; chief pharmacist, U. S. Naval Aviators, France.

R. E. SYDOW, with Brunswig Drug Co., Los Angeles, Cal.; 143rd Field Artillery, U. S. A., France.

HOWARD H. GIVENS, sales representative, Brunswig Drug Co., Los Angeles, Cal.; Battery C., 143rd Field Artillery, U. S. A.

CARL A. EGGERS, formerly proprietor of Eggers' Pharmacy, San Francisco, Medical Department, 52nd Artillery, U. S. A., France.

DONALD WIETSKI, drug clerk, Voss & Ehlers, Cincinnati, O.; U. S. A., Camp Meade, Md.

H. E. RITTER, city salesman, William S. Merrell Chemical Co., Cincinnati, O.; U. S. A., Camp Taylor, Louisville, Ky.

LELAND M. TUCKER, Ph. G., Steinberg Drug Co., Tulsa, Okla.; U. S. A.

FRED McQUEARY, Ph. G., formerly with C. H. Dalrymple, Springfield, Mo.; U. S. A., Waco, Texas.

JOHN B. APPLEGATE, son of J. E. Applegate, druggist, Rogers, Ark.; Aviation Branch U. S. A., San Antonio, Texas.

JOSEF A. GRAF, Ph. G., Alton, Ill.; Co. I, Chemical Battalion, Edgewood Arsenal, Edgewood, Md.

Iowa University College of Pharmacy sends the names of the following students and graduates who have recently entered service:

E. C. RYAN, '17, Humeston, Ia.; Great Lakes Naval Training Station.

F. L. WEBER, '17, Clinton, Ia.; Depot Brigade, Camp Dodge, Ia.

J. R. DODEN, '18, Wilton Junction, Ia.; Depot Brigade, Camp Dodge, Ia.

T. M. MORRISON, '16, Iowa City, training in Vocational Unit, Ames, Ia.

SHERMAN MORRISON, '18, Iowa City, training in Vocational Unit, Valparaiso, Ind.

M. H. SIDNER, '19, Griswold, Ia.; Officers' Training Camp, Marine Corps, Paris Island, S. C.

L. W. MARCH, '19, Hot Springs, S. D.; acting sergeant, Hospital Corps, Brookings, S. D.

M. H. ANDERSON, '15, Dike, Ia., U. S. A.

W. A. DODD, ex '17, Iowa City; member of State University Ambulance Corps, now in France. Seriously wounded but will recover. Has been twice decorated with the croix de guerre.

B. C. ROGERS, '18, Clinton, Ia.; 2nd lieutenant, Fort Sheridan, assigned to instruction of the A. A. T. C. at a college in Texas.

L. A. PORTER, '18, Missouri Valley, Ia.; enlisted in the Hospital Corps, U. S. Navy.

GEORGE BONNER, with H. W. Taylor & Son, Luzerne, N. Y.; pharmacist, Base Hospital, Allentown, Pa.

RAY STANLEY KELLEY, associated in business with Kelley's Pharmacy, No. Troy, Vt.; pharmacist's mate, U. S. Marines, base hospital, Quantico, Va.

STEPHEN M. BOLOGA, fountain manager, W. D. White & Co., Wilkes-Barre, Pa.; private, Motor Transportation Corps, Training Co. 11, Camp Jackson, Fla.

HENRY CLAUDE GRINDLE, in charge of prescription department E. P. Wilson's Drug Store, Seville, Ga.; 3rd pharmacist's mate, U. S. Naval Hospital, Charleston, S. C.

Smith, Kline & French Co., wholesale druggists, Philadelphia, sends the "Era" the following list of its employes who have enrolled in the country's service:

ROBERT TYLER, Battery D, 307th F. A., American Expeditionary Force.

MERVIN ROSENBERGER, Medical Supply Depot, Camp Meade, Md.

JOHN SMARKOLA, Co. B., 304th Engineers, American Expeditionary Force.

ALEXANDER HANNA, sergeant Co. E, 110th Reg. A. E. F.; reported wounded and doing well.

TIMOTHY KIRBY, Battery F, 312th F. A., American Expeditionary Force.

THOS. FEHENBERGER, Animal Embarkation Dept., North Charleston, S. C.

HARRY CORNFIELD, Headquarters Co., 111th U. S. Inf., American Expeditionary Force.

WALTER DAVIS, Pier 19, N. Delaware ave., District Barracks, Philadelphia.

RALPH PARSONS, Building No. 6, Radio Station, Navy Yard, Philadelphia.

FRANK R. HUMPHRIES, M. D., 1st lieutenant, asst. surgeon, U. S. R., Co. 22, 6th Battalion, Camp Greenleaf, Chickamauga Park, Ga.

WILLIAM ARNOLD, U. S. S. Cleveland, c/o Postmaster, N. Y.

JOSEPH, TRAVASCIO, 5th Pioneer Inf., Camp Wadsworth, S. C.

FRANK McDONNELL, c/o Knights of Columbus, Camp Zachary Taylor Barracks, Louisville, Ky.

ALOYSIUS F. DINEEN, 2nd Bn. S. O. S. 111th Inf., A. E. F.

WILLIAM E. PERSING, Chemical Warfare Service, c/o Astroria L. H. & F. Co., Astoria, L. I., N. Y.

JAMES L. PAUL, Co. K, 4th Inf., A. E. F., France; reported wounded.

GEORGE FUHI, c/o Capt. Henry Taylor, Co. B., 304th Engineers, A. E. F.

JOSEPH KIRBY, Battery F, 312th F. A., A. E. F.

BENJAMIN WADE, Co. F, 368th Inf., A. E. F.

SAMUEL GLICKMAN, 3rd Brigade Infirmary, Inf. Replacement Camp, Camp Lee, Petersburg, Va.

FRED WILLIAMS, S. S. Lake Lemando, c/o U. S. Consul, Nantes, France.

WINIFRED WITHAM, Co. D, 318th Inf., 80th Div., A. E. F.

THEO. DUBOIS, assistant paymaster, U. S. N. R. F., 404 Stenick Bldg., Hoboken, N. J.

LLOYD KRIPS, sergeant 1st class, S. S. U., 501 Secteur Postal 126, France.

JOHN GALLOWAY, Cas. Det., Hdqtrs, U. S. A. Ambulance Service, Paris, France.

WM. B. CLARE, private 1st class, Med. Corps, 109 U. S. Inf., A. E. F., France.

NELSON W. PASCOE, Hdqtrs Detachment, Babylon, L. I., N. Y.

RICHARD CONWAY, master signal electrician, 119th Aero Squadron, Langley Field, Hampton, Va.

JOSEPH FORREST, Medical Depot, U. S. A., Edgewood Arsenal, Md.

RICHARD BINDER, Sanitary Corps, Gas Defense Service, Astoria, L. I.

ELMER J. WHITESIDE, U. S. S. Mercy, c/o New York Postmaster.

FRED SLOCUM, 1815 Dickson ave., Scranton, Pa.; naval dispensary, 20 S. 15th st., Philadelphia.

GEORGE LANGHAN, Camp Quartermaster, W. 111 Reclamation, Camp Meade, Md.

NATHAN SHUTE, Co. A, 315th Inf., A. E. F .

PRESTON WARREN, U. S. Marine Corps, Paris Island, S. C.

JAMES LAFFERTY, Med. Detachment, 50th Eng., A. E. F.

CHAS. W. CORNELL, Jr., Med. Supply Detachment, Camp Stewart, Newport News, Va.

CONRAD HEISER, Battery A, 14th Battalion, Barracks 12 F. A. R. D., Camp Jackson, S. C.

DAVID FUREY, Battery B, 3rd Battalion, F. A .R. D., Camp Jackson, S. C.

WALTER A. COSTA, Camp Lafayette, Co. A, Easton, Pa.

RUSSELL E. PRICE, Inf. Replacement Camp, Co. H, Camp Lee, Va.

CLAYTON FRENCH, captain, Chemical Warfare Service, U. S. A.

CHAS. CLOUSE, U. S. Navy, address unknown.

JOHN GALLEN, gun captain, U. S. Navy, Barracks 225, League Island vice squad.

HARRY KEINBERGER, U. S. Army, address unknown.

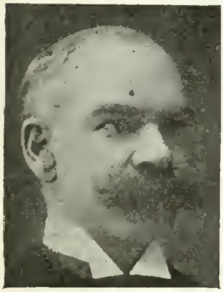
FRANK OHNTRUP, U. S. Army, address unknown.

JOSEPH MAXWELL, U. S. Navy, address unknown.

JAMES A. PENTZ, served abroad 1 year as able seaman; took four month's course at Annapolis and is now ensign on Active Service.

Obituaries

JOHN C. GALLAGHER



John C. Gallagher, for many years prominent in the councils of the National Association of Retail Druggists, and proprietor of the pharmacy at 466 Grove street, Jersey City, N. J., died in Oct. 7 following a long illness from Bright's disease. He was about 57 years of age, and had been in the drug business at the above address for nearly a quarter of a century, succeeding to the business of the late Dr E. C. Kennedy, who had established the store many years ago. Besides his interest in the N. A. R. D. Mr. Gallagher was an active participant in many forms of pharmaceutical organization work, city, state and national. He served for some years as president of the Jersey City Druggists Association, and was very active in the N. J. Ph. A., of which he was president in 1914. He joined the A. Ph. A. in 1893, and was a member of the New York branch of that organization, which adopted appropriate resolutions on learning of his death. He was noted as a good debater, and in the discussion of various issues in which he was interested he was always able to gain the attention of his hearers, his greatest work, perhaps, being his attempt to secure better trademark and other legislation. He is survived by his widow and one daughter.

GEORGE L. DOUGLASS

George L. Douglass, formerly general counsel for the Proprietary Association of America, and for years prominent as an attorney for drug and affiliated lines, died in Washington, D. C., on Oct. 21. He was born in Pennsylvania about 65 years ago. He graduated from the law school of Columbian University Washington, where he later became connected with the Department of Justice. He subsequently lived in Kansas for about a dozen years, where he took an active part in public affairs, serving several terms in the Legislature, becoming speaker of the House in 1893. In 1896 he moved to Chicago, for some time thereafter taking an active part in political affairs, especially in the sound money campaigns of 1896-1900. He then devoted his entire time to his law practice and to the affairs of the Proprietary Association, a position which he held for many years. He was a staunch believer in adequate anti-narcotic laws, and a constant advocate of pure food and drug laws, which he maintained, if intended to protect the public from injury and fraud would be of benefit to the manufacturers of legitimate articles. He was an earnest worker to secure the passage of uniform State legislation in harmony with the Federal Food and Drugs Act, which he said was "righteous law and should have the support of every good citizen."

FRANK A. MALKOVSKY

Frank A. Malkovsky, formerly proprietor of the pharmacy at 957 Fulton street, Brooklyn, N. Y., died on Oct. 19 at Southern Pines, where he had gone to recuperate. Death was due to a complication of diseases. Mr. Malkovsky was a capable and experienced druggist, and early in his career was for a number of years in charge of one of the departments of Hegeman & Co., 200 Broadway, New York city, serving as a buyer. He then joined the advertising staff of The Pharmaceutical Era, where he remained until about 1909, when he bought the pharmacy in Brooklyn. This he later sold and again took up work with the pharmaceutical press, returning to the Era about the beginning of the present year, his last work being in connection with the 1918 edition of the Era Price List. On account of failing health he was obliged to give up his work and go to the mountains for recuperation. He was a most conscientious worker, had a wide knowledge of drug prices, and was held in high regard by a large circle of friends in the drug trade. He was about 46 years of age.

THOMAS LATHAM

Thomas Latham, who operated a store at 1309 Third avenue, New York City, for many years, died on September 24 of diabetes, from which he had long suffered. Only a short time ago he became so ill that he sold his store to V. Loewenberg, proprietor of a store at 1559 Second avenue, New York. Mr. Latham was prominent in local organization work, and during the last twenty-five years has taken an active part in various pharmaceutical associations. He was born in England about 63 years ago. After receiving his education he came to New York and entered the employ of Eimer & Amend, with whom he remained a number of years. He purchased the pharmacy which he conducted for about 30 years and up to the time of his final illness. He was a member of the American Pharmaceutical Association, which he joined in 1900, taking an active part in the meetings of the New York branch of that organization. He had also served as president of the New York County Pharmaceutical Association, and was a member of the New York State Ph. A. He is survived by a sister.

L. A. BUNNELL

L. A. Bunnell, proprietor of the L. A. Bunnell Drug Co., Dayton, Ohio, died recently at Miami Valley hospital, where he had been ill for several months, having suffered a nervous breakdown during the summer. He had been identified with the drug business in Dayton for the past twenty years. He is survived by his widow, two daughters, and his father and mother, Dr. and Mrs. R. W. Bunnell, of Green Fork, Ind.

FREDERICK M. SCHMIDT

Frederick M. Schmidt, veteran Chicago pharmacist, died recently at the age of 58. He is survived by his son and daughter. Mr. Schmidt was president of the Druggists' Veteran Association and the Military Order of the Loyal Legion. He served for eight years as a member of the Illinois board of pharmacy after appointment by Governor Altgeld.

Kephalin is the hemostatic phosphatide obtained from spinal cord and brain tissue. A suspension containing 0.1 to 0.2 per cent. in normal saline solution is applied in bleeding or oozing surfaces.

DEFERRED CLASSIFICATION FOR CLERKS

Surgeon General Recommends That Drug Clerks and Pharmacists Be Not Drafted Into Army During Influenza Epidemic—Necessary to Show That Their Occupation Is Essential

We are in receipt of the following communication which is self-explanatory:

Editor, THE PHARMACEUTICAL ERA:

I am happy to be able to state that as the result of an effort on my part as per correspondence which I give below, I have secured a decision by the Surgeon General and the Provost Marshal General Crowder, to the effect that drug clerks and registered pharmacists be not drafted into the army during the influenza epidemic. and that thereafter a deferred classification should be given them if they can show, as practically all of them can, that their position is "necessary to the enterprise in which they are engaged." This is the first successful effort made to have pharmacy recognized as an essential profession and industry and this should be promptly followed up and given all the publicity possible so as to get behind our movement for a pharmacy corps by public sentiment through the press:

Baltimore, October 10th, 1918.

To the Surgeon General's Office,
Washington, D. C.

Gentlemen:

On behalf of the pharmacists and pharmaceutical colleges of this country I am again addressing you in this emergency brought to the attention of the people and the medical profession by the epidemic now raging all over the land. I appeared before your office with seventeen other representative gentlemen representing the National Drug Trade Conference in behalf of recognition of pharmacy as an essential industry and profession, on September 26th, and were heard by General Richard and Colonel Darnall. You refused to recognize pharmacy as an essential industry and as a needed branch in the army establishment. Today the country is confronted by a demand for pharmacists' skill and services unprecedented in its history. Pharmacies by the hundred are being closed because their owners or their registered clerks are being drafted into the army. The result is pharmacies by the hundreds everywhere are overrun with prescriptions for the epidemic and they have to close their stores because they cannot handle the work, and many are working all night and day. Therefore the Provost Marshal under the advice of the Surgeon General's office should give registered pharmacists in the draft deferred classification to enable the civilian population to secure their medicines. Hundreds and thousands of patients are unable to procure medicines during the past few days and more and more pharmacists are lying down sick from overwork and worry which is fast bringing on a crisis all over the east. It would seem that pharmacy is today being shown to be one of the direst needs of the public and the medical profession to help quell the epidemic and save the lives of our people. Will the Surgeon General's office still refuse to recognize the need of the people today for pharmacutical service? Please inquire of health boards in any of our cities and let them tell you of the deplorable conditions in the dispensing of medicines. Dr. John D. Blake, the Health Commissioner of Baltimore, told us today that he felt the Surgeon General's office had made a mistake in refusing to recognize pharmacy, and should do so, and induce Provost Marshal Crowder to release many of the pharmacists now in the draft for return to their stores to help out the fighting of this epidemic in this country by giving them deferred classification. I am enclosing a clipping from today's Baltimore "Sun" on the subject. The Educational Board also should recognize pharmacy students as worthy of forming if necessary in conjunction with other units military organizations, so that our colleges of pharmacy will not have to close and cut off the future supply of pharmacists so urgently needed at all times for the public health and especially so badly needed now.

Respectfully submitted,
(Signed) A. R. L. DOHME.

A copy of this letter was simultaneously sent to Provost Marshal General Crowder, Surgeon General Rupert Blue of the Public Health Service, and Prof. Charles E. Munroe, Chairman of the Board of Educational Instruction.

The following reply was received under date of October 16th from the Provost Marshal General:

Dr. A. R. L. Dohme,
Member Executive Committee,
American Drug Manufacturers Assn.,
Baltimore, Maryland

Dear Sir:

I have read with interest copy of your letter of October 10th, addressed to the Surgeon General's Office, in which the importance of pharmacy as a necessary industry is submitted. In order to overcome the situation brought about as a result of drug clerks being drafted into the Army and the heavy demands that are made upon pharmacists at the present time, it has been suggested that this office release many of the pharmacists who have been called to the colors and grant them a deferred classification so that they may resume their civilian employment, and assist in fighting the epidemic.

Upon induction of a registrant into military service the jurisdiction of the Selective Service Law and of this office terminates, and all questions pertaining to the release of soldiers from the Army are consequently for the determination of the military authorities. Hence the suggestion advanced by the Health Commissioner of Baltimore could not be put into effect by this office.

As far as the selection of men for military service is concerned, the matter lies entirely in the hands of District Boards which are authorized, hy the Selective Service Law, to consider claims for deferred classification based upon engagement in industries, occupations, or employments. The recognition of a particular trade or business as an "essential" industry, occupation, or employment is not binding upon District Boards which, in considering claims for deferment based on industrial or occupational grounds, must find, first: whether the industry, occupation or employment is "necessary" to the maintenance of the Military Establishment, the effective operation of the military forces, or the maintenance of national interest during the emergency, and second; whether the individual himself is, within the meaning of the law, "necessary" to the enterprise in which he is engaged.

E. H. CROWDER,
Provost Marshal General.
(Signed) By Roscoe S. Conklin,
Lieut. Colonel, J. A.,
Chief, Classification Division."

From the Surgeon General's office under date of Oct. 18 has come as a response to my letter the statement that the Surgeon General's office has recommended to the Provost Marshal that drug clerks and pharmacists be not drafted into the Army during the influenza epidemic.

I feel that this information should go out at once through all pharmaceutical journals to the pharmacists of the country so that they may be benefitted promptly by the decision of the Army chiefs. While I have had no reply yet from the Educational Committee, I have heard that colleges of pharmacy are being taken care of by permitting pharmacy students to join Army Reserve units at educational institutions and I hope that every college of pharmacy will not fail to use this information to the utmost in helping itself maintain its position and courses and induce young men to continue to pursue its courses for provision for future pharmacists must be made in the interests of the public health and welfare.

If we had adopted and put into effect federated pharmacy with a central office and an efficient well-paid publicity department, we could have handled this epidemic and draft situation much more promptly and effectively.

Our hope now is that pharmacists will realize the value of co-operation and federation and not let the narrow views of a certain few men high in authority in certain associations, prevent the accomplishment of a much needed federated effort and organization in pharmacy.

I am also informed that many of the pharmacists in the army camps among the drafted men have been returned to their homes for service in this epidemic emergency; at least that is the case at Camp Meade, here near Baltimore.

Very truly yours,
A. R. L. DOHME.

CHICAGO DRUG CLUB ELECTS OFFICERS

The Chicago Drug Club elected the following officers at its annual meeting held on Oct. 1: President, Otto H. Mentz; 1st vice-president, Joseph Forbrich; 2nd vice-president, John A. Peetz; 3rd vice-president, William P. Knoche; recording secretary, William P. Knoche; recording secretary, William Tervehn; financial secretary, John M. Schwalbe; treasurer, Carl Abrahamson; chairman of entertainment committee, Lawrence Cripe; assistant chairman, Lee Pedigo; member of the board of trustees, Richard Voge.

The N. W. D. A. Convention

War Programme at 44th Annual Meeting—Plan Many Reforms

COOPERATION with the Government in the work of carrying on the war and the solution of the economic problems caused by the war were the dominant notes in the proceedings and discussions at the 44th annual convention of the National Wholesale Druggists' Association, which opened on Monday, October 7, at the Hotel Astor, New York City. The attendance at the opening session was good in spite of the stress of business under which all of the members are working.

Following the usual preliminaries, President Charles E. Bedwell introduced John R. Young of the Merchants' Association of New York, who welcomed the association to the city as the representative of Mayor John T. Hylan. The latter sent his regrets.

The President's Address

President Bedwell called upon ex-President E. C. Hall to occupy the chair while he delivered his address. This paper was earnestly patriotic and referred to the war as the first thought in the minds of business men. Mr. Bedwell spoke of the progress of preparation for effective participation in the struggle since the last meeting of the association, and commented on the pride of the organization in the part its members were playing in the development of war efficiency.

Referring to economic conditions, President Bedwell said that business was on a firm footing; crops were up to the average and where there was a shortage in volume it was more than made up by the money value. He presented some interesting facts from recent Government agricultural reports.

Drugs and medicines were greatly restricted, he said, and he anticipated that conditions would be still worse before they were better. There were indications, he stated, that business might be too strenuously pushed, and that there might be a protest. At the same time business should not complain if 80 per cent of excess profits were taken over for a good purpose. He was emphatic in his denunciation of doing business on too small a margin of profit. Speaking of the help question, Mr. Bedwell expressed the fear that the confusion and embarrassment occasioned by shortage would obtain to even greater extent, and that the solution, as far as solution might be expected, lay in the employment of women.

Mr. Bedwell was emphatic in the statement that too large a percentage of the business of the wholesale drug business was done through salesmen. He denounced over-solicitation, a question which has been the subject of much discussion of late. Mail order business, he said, should be greater than that brought in by salesmen. The selective draft and the consequent shortage of salesmen may cure this. He advocated a curtailment of service to the retail stores, including fewer calls by city salesmen and less frequent deliveries. He also denounced emphatically too much indulgence in the return of goods. Thirty days, he said, should be the limit of time for returns. Wholesalers, he said, also are too liberal in the matter of discounts, and he advocated the elimination of the cash discount altogether.

The report of M. E. Sherman, chairman of the committee on commercial travellers and selling costs was very interesting in the light it shed on the subject. The information elicited was the result of a questionnaire sent out to 220 members of the association. The replies indicated among other things a small reduction in the city selling force. The majority does not believe in the extensive withdrawal of this branch of the staff.

A large majority believe that the frequency of the country calls should be reduced to once in three or four weeks. Over solicitation was condemned in the report, it being stated that as a rule it resulted from too great a number of houses in certain localities and the attempt to outdo competitors by frequent calls. It is a decided evil, the report states, and some action should be taken.

Dr. Adolph W. Miller read a special report on metric weights and measures which included a review of the proceedings of the last convention of the American Metric Association of which the N. W. D. A. is a constituent member.

In the discussion which followed the reading of this report, Dr. William Jay Schieffelin said that a change to the metric system would mean double work for the present generation, but it would be a sacrifice for the benefit of our children. He had heard that 30 to 50 per cent of the clerical work could be saved in wholesale drug houses by the adoption of the metric system, and believed that even the latter figures were conservative in some cases.

The report of the committee on proprietary goods, read by Chairman Robert Bradley, was reassuring in its optimistic tone. There had been no serious losses, due to war conditions, the report stated, but the net profits were less than before the war. Cost of production has become such an uncertain quantity that many manufacturers have discontinued the practice of printing the retail price on the package. Mr. Bradley urged the members to unite against the sale of anything which might be used as a substitute for alcoholic beverages. He denounced "free deals" and bonuses as unbusiness like and unfair, and spoke strongly against the subsidizing of wholesalers' salesmen by manufacturers. He stated that the efficiency of the service wholesaler had been demonstrated under prevailing conditions.

The Federal Trade Commission's Complaint

A. Leo Everett, of counsel for the association, was the next speaker. Mr. Everett explained the Sherman and Clayton acts, interpreted the function of the Federal Trade Commission, and discoursed upon the nature of the complaint against the N. W. D. A. He stated in effect that the action was not a suit instituted by the commission itself, but was a complaint filed by the commission's counsel on grounds more supposititious than anything else. The action, he stated, was somewhat analogous to indictment by Grand Jury, which is found upon the presentation of evidence that indicates that the law has been violated. The evidence found by the counsel would be presented to the commission when complete, which, he thought would be in about a year, and the case would then be decided by the commission. Meanwhile, he assured the members against whom the complaint was issued, they had no cause to feel alarmed, because, as he understood the law and the facts, there had been no violation.

R. H. Ellis, of the Hessig-Ellis Drug Co., of Memphis, Tenn., read an interesting paper on the subject of trade acceptances. The principles of this method of credit were explained, and the benefits as they appeared to Mr. Ellis were presented in an able manner. Mr. Ellis rcommended the elimination of the cash discount and the substitution of the net price sales plan.

Other committee reports were heard with interest and discussed at length.

The social features included a banquet at the Hotel Astor on Thursday evening and a boat ride up the Hudson to Bear Mountain on Friday.

The election of officers on Wednesday resulted as follows:

President, Arthur D. Parker (Parker-Blake Co.) New Orleans; vice-presidents, Joseph Plaut (Lehn & Fink), New York city; William J. Murray, Jr. (Murray Drug Co.), Columbia, S. C.; W. F. Cram, Des Moines, Ia.; R. W. Blanding (Blanding & Blanding), Providence, R. I., and Fred E. Yahr, Milwaukee. Board of Control, George R. Merrell (J. S. Merrell Drug Co.), St. Louis, Mo.; L. D. Sale (Western Wholesale Drug Co.), Los Angeles, Cal.; F. C. Groover (Groover-Stewart Drug Co.), Jacksonville, Fla.; H. D. Faxon (Faxon & Gallagher Drug Co.), Kansas City, Mo.; Lee M. Hutchins (Hazeltine & Perkins Drug Co.), Grand Rapids, Mich.; R. R. Ellis (The Hessig-Ellis Drug Co.), Memphis, Tenn.; W. T. Harper (J. W. Edgerly & Co.), Ottumwa, Iowa; G. Barrett Moxley (Kiefer-Stewart Co.), Indianapolis, Ind.; S. D. Andrews (Minneapolis Drug Co.), Minneapolis, Minn.; B. A. Jackson (George L. Claflin Co.), Providence, R. I., and W. E. Greiner (Greiner-Kelley Drug Co.), Dallas, Tex.

The Board of Control, with the approval of the president, appointed the following: Secretary, F. E. Holliday, of New York; assistant secretary, C. H. Waterbury, of New York; treasurer, Title Guarantee & Trust Company, of New York.

ADOPT FLAVORING DEFINITIONS

Department of Agriculture Approves Soda Water Standards in Enforcement of Food and Drugs Act

The Department of Agriculture has adopted as definitions and standards for soda water flavors and soda in the enforcement of the Food and Drugs Act the definitions adopted by the Joint Committee on Definitions and Standards, November 19, 1915, and approved by the Association of American Dairy, Food and Drug Officials, August 10, 1916, and by the Association of Official Agricultural Chemists, November 21, 1917.

Additional definitions and standards are now under consideration, only those pertaining to ginger ale and sarsaparilla having thus far been adopted. The standards which are to be made official for the department are as follows:

1. **Ginger ale flavor** is the water-soluble product obtained from ginger, with or without flavoring substances which do not simulate the flavor or pungent effect of ginger. The predominating flavor of the product is that of ginger.

2. **Ginger ale with capsicum flavor** is the water-soluble product obtained from ginger and capsicum, with or without other flavoring substances. The predominating flavor of the product is that of ginger.

3. **Sarsaparilla flavor** is the water-soluble product prepared with oil of sassafras and methyl salicylate or oil of wintergreen or oil of sweet birch and with or without other essential oils or extract of sarsaparilla.

1. **Ginger ale** is the carbonated or artificially carbonated beverage prepared with potable water, acidulated sugar (sucrose) sirup, and ginger ale flavor.

2. **Ginger ale with capsicum** is the carbonated or artificially carbonated beverage prepared with potable water, acidulated sugar (sucrose) sirup, and ginger ale with capsicum flavor.

3. **Sarsaparilla** is the carbonated or artificially carbonated beverage prepared with potable water, sugar (sucrose) sirup, and sarsaparilla flavor. It may or may not be acidulated.

TO OBTAIN LISTS OF NURSES

Drug Trade Asked to Cooperate With Government in Securing Information

The American Red Cross is planning to use every means available to impress upon nurses and women with elementary training in the care of the sick the importance of the Nursing Survey which has been undertaken at the request of the War Department. Placards will be placed in every drug store and the Red Cross chapters have been asked to offer suggestions as to how druggists can co-operate in obtaining the necessary lists of nurses, aids, undergraduates, hospital attendants and practical nurses.

The survey aims to enroll on the records every woman who has had any sort of nursing experience. Its need was felt by the War Department because war nurses have been hard to secure. The survey, when complete, will enable the Red Cross and the Army to determine how volunteer nurses can be used so that trained nurses can be released for the war service.

Women who are trained nurses, women who have had only undergraduate nursing courses, those who have taken Red Cross courses, midwives, those who have been or are hospital attendants, and those women who have had practical experience in home nursing are asked to enroll.

Registration does not mean actual service. It merely means that the Government as a result of the survey will have at hand complete information as to the nursing resources of the country.

The Red Cross officials believe that the drug stores can help in obtaining the names of nurses because most druggists know just what the resources of their neighborhoods are. These men will be asked to aid the survey as a war work.

Chapters plan to have agents in the drug stores to give questionnaires to all nurses. The druggists themselves are requested to ask women they know to be nurses to enroll.

PRODUCTION OF NON ALCOHOLIC BEVERAGES

The War Industries Board has just made public a resume of the curtailment which will be effective in the manufacture of soft drinks beginning November 1.

Effective on that date, the production of non-alcoholic beverages (other than near-beers, which have been entirely prohibited after December 1) including the manufacture of fruit juices, water, concentrated extracts, syrups, and carbonic acid gas, are to be curtailed on the basis of fifty per cent per annum based on the production for the calendar year of 1917.

Under this order, the production of one month may not exceed fifty per cent of the production of the corresponding month of 1917. Grape juice, cider and loganberry juice products of this year's harvest may be produced, but the restriction must apply to the year 1919.

ALCOHOL TAX CUT BY SENATE COMMITTEE

Washington, D. C., Oct. 25.—The Senate Finance Committee has decided to cut in half the tax rate on non-beverage alcohol, as proposed in the Revenue Bill passed by the House of Representatives. The rate as designated by the committee is $2.20 a gallon, as at present. This action was done at the request of representatives of the drug interests.

The election of officers for 1918-19 for the Ontario College of Pharmacy, Toronto, resulted as follows: Honorary president, Dean Heebner; honorary vice-presidents, Mrs. Boyce, Miss C. Jacques, president C. P. L'Heureux; vice-president, C. D. De Wolfe; secretary, J. H. Prudham; treasurer, G. Schaefer.

Educational Department

DEVOTED TO INFORMATION, CRITICISMS AND SUGGESTIONS ON PHARMACEUTICAL TOPICS OF SPECIAL INTEREST TO ERA COURSE STUDENTS, DRUG CLERKS AND ALL WHO ARE INTERESTED IN THE STUDY OF PHARMACY

Conducted by **CHARLES H. STOCKING**, Ph.C., B.Sc., Director of the Era Course in Pharmacy.

Students, Let Us Hear From You

IT IS the aim of the Director to give each month in these columns suggestions and answers to questions which will be of help to the students enrolled in the Era Course in Pharmacy, drug clerks, and to all others who are interested in problems and queries of a general pharmaceutical nature. If you want to know the requirements for registration in any particular state or have difficulty in solving a problem in pharmaceutical arithmetic or need advice about filling an incompatible prescription, let us hear from you. We shall be glad to answer as many questions each month as space will permit.

Our Graduates

We are printing this month a list of recent graduates from the Era Course and wish to extend to them our very best wishes and congratulations. The young man or woman who graduates from the Era Course in Pharmacy shows by that very fact that he or she is made of the "right stuff" and will succeed in other undertakings. The power to pursue a course of home study alone without the incentives of class-room work proves that the student possesses grit and determination that are worthy of the highest commendation. To complete the Course to the satisfaction of the Director and receive the diploma which is given, every student must send in satisfactory answers to questions based on about sixty lectures and must also pass a satisfactory final examination covering the entire course.

Goal Reached Only by Acquiring Knowledge

Era Course students are in almost every instance employed in the practical work of the drug store during the day, and have to take time for study out of their leisure hours, often when body and mind are demanding rest. Pleasures and diversions are sacrificed for the sake of the goal they see ahead, as well as on account of the growing realization that the Lectures are making them better workers, are giving them an insight into the reasons for the varied pharmaceutical processes, and are furnishing them with technical knowledge that they could not obtain except by endless questioning of their employers, granting that the latter had the time to instruct them, and could impart the desired information in every case. It is a feeling of this kind which is keeping hundreds of them busy throughout the year, using each minute to advantage, and making of themselves trained pharmacists, who know and can do, who become registered pharmacists or assistants and who help along the profession of pharmacy as they grow older. It needs no argument to prove that the sacrifices would not be made unless each and every student felt that they were worth while, and that the added labor of the Course would be more than repaid by increased efficiency, personal satisfaction, and greater earning power.

Possibilities of Self-Study

To all those who are interested in studying pharmacy, but who find it impossible to leave home or attend college, we will say that a Prospectus fully describing the course is waiting for them at the Director's office, and will be sent immediately upon receipt of their names and addresses. It costs but a penny, plus the labor of writing a few words on a post card, but it may be the means of bringing you in touch with possibilities in the way of self-help which you did not know existed. Send for a Prospectus today.

Address, Director, Era Course in Pharmacy,
Care D. O. Haynes & Co.,
No. 3 Park Place, New York.

Send in Your Lessons Promptly

A number of students have only a few months, and some only a few weeks in which to send in the remainder of their examination papers. Eighteen months from the date of matriculation is allowed in which to complete the Era Course recitation work and final examination. This amount of time always proves sufficient for those students who are at all regular in sending in their papers.

The Director is prepared to correct all papers promptly and to return them within a day or two after they have been received at this office. Assistance is given on difficult points and every effort made to help every one enrolled in the course in order that the work may prove both interesting and profitable.

There never was a time in the history of pharmacy when the demand for qualified registered pharmacists and assistants was so great. In order that you may reap the reward due to those who use their best efforts for success in life we urge all Era Course students to speed up. Use more of your spare time for this profitable work.

To all unregistered clerks we would call particular attention to the advantages of home study and suggest that you send for a Prospectus at once.

Recent Graduates

Matriculation Number		Graduation Av. per ct.
10.025	Benjamin B. Crombie, Port Chester, N. Y.	93%
9,766	Lloyd Edwin Waltz, Pennville, Ind.	95%
9,231	Miss Jessie I. Lumsden, Plattsburg, N. Y.	94%
9,539	Miss Frances Brusseau, New Orleans, La.	93%
10.018	Albert E. Vadney, Montour, Idaho	91%
9,955	Alfred Manseau, Winooski, Vt.	89%
9,449	Sister M. Robertine, Orange, N. J.	93%

Answers to Inquiries

1. What are chemical symbols?

They are abbreviations used to express the name of the element for which the symbol stands. The abbreviation thus used is generally either the first or the first two letters of the Latin name of the element. For instance, the Latin name of copper is cuprum; its chemical symbol is Cu. The Latin name of mercury is hydrargyrum, but its chemical symbol is Hg. These symbols designate, not only the elements, but also a definite proportion by weight of the elements. For instance, C stands not only for carbon, but also for one "chemical unit weight" or 12 parts by weight of carbon. This "chemical unit weight" is more often called atomic weight, and is made use of in all chemical calculations.

2. What does the formula H_2SeO_4 represent?

A number of students have been puzzled regarding this formula and some have indicated that the printer made an error and that the formula should read H_2So_4. By referring to page 13 of Part I it will be noticed that the symbol "Se" stands for the element Selenium. The two available hydrogen atoms indicate that the substance is a dibasic acid. No one, therefore, should have any difficulty in giving this compound its correct name—Selenic acid.

3. What is a calorie?

It is the amount of heat consumed in raising the temperature of one gram of water from 0° C. to 1° C. Several have answered the question by saying that a calorie is the amount of heat necessary to raise the temperature 1°. This is obviously very indefinite, as no statement is made to show whether the temperature referred to applies to the human body, a bucket of water, or a ton of brick. In answering all questions students should aim to be as definite as possible and to make the proper choice of words so as to tell "the truth, the whole truth, and nothing but the truth."

4. What is the chemical formula for ferrous nitrate?

In ferrous compounds iron is bivalent, while in ferric compounds it is trivalent. A bivalent element can replace two atoms of hydrogen in acids. Now, since nitric acid, from which all nitrates are derived, is a monobasic acid—that is, contains only one replaceable hydrogen atom—an atom of bivalent iron can replace the hydrogen of two molecules of nitric acid. The equation representing the action of nitric acid on iron would be:

$$Fe+2HNO_3=Fe(NO_3)_2+H_2,$$

and the formula for ferrous nitrate is $Fe(NO_3)_2$.

BOARD EXAMINATIONS

ILLINOIS

At the August meeting of the Illinois Department of Registration and Education held in Chicago the following passed successful examinations:

Registered pharmacists: Edgar Baldwin, Geneva; Benjamin Berkin, Chicago; Anthony Bologna, Chicago; Wm. F. Borchers, Chicago; Orlando Boucher, Chicago; Wm. T. Bowden, Chicago; Rola S. Bryant, Omaha; Harry G. Bryer, Chicago; Morgan J. Davis, Litchfield; Wallace J. Formhals, Ottawa; Morris Ginsburg, Chicago; Joshua D. Goodwin, Chicago; Wm. A. Graham, Chicago; John E. Hiller, Anna; Louis C. Jaeger, Chicago; Mayer H. Kisler, Chicago; David C. Mebane, Evanston; Edward J. Roberts, Roberts; Fremont E. Schneider, Chicago; John Stockbar, Lemont; Michael I. Tarlow, Chicago; Charles Weinstein, Chicago; Fred B. Wolf, Chicago.

Assistant pharmacists: Joseph Allegretti, Chicago; Albert A. Cohen, Chicago; Luther B. Decker, Fairburg; Harry L. Derr, Chicago; Ella K. Dubsky, Chicago; Leo J. Dunn, Chicago; Anton H. Florian, Chicago; Zygmunt Glowacki, Chicago; Leo J. Gossmann, Pana; Raymond Greeley, Riverside; Lee S. Hill, Chicago; Henry T. Hoffman, Chicago; J. Carl Kamplain, Chicago; Henry Levin, Chicago; Walter J. Mendralski, Chicago; Louis Park, Chicago; Dave Rottman, Chicago; Edward A. Sandler, Chicago; Israel E. Shulruff, Chicago; Boris J. Starlight, Chicago; J. M. Tankel, Chicago; Eli Tarlow, Chicago; Israel Weisman, J. Werba, E. N. White, and A. W. Zander, Chicago.

The next examination for applicants for registered pharmacists will be held in Room 547 County Building, Chicago, on Tuesday, November 12, at 9 o'clock in the morning. On Thursday, November 14, an examination will be conducted for applicants for assistant pharmacists.

TEXAS

The Texas Board of Pharmacy examined 49 applicants at its meeting held in the St. Anthony Hotel, San Antonio, on Sept. 17, and the secretary was authorized to issue certificates to practice pharmacy to the following successful candidates:

B. P. Acune, El Paso; C. H. Brazier, Quanah; O. H. Brown, Lueders; F. G. Daehne, Flatonia; Lester Ellis, Abilene; Marx J. Hall, Waco; W. A. Hawkins, Menard; T. C. Hornbuckle, Morgan; A. C. Johnson, Waldrip; W. J. Long, Thelia; Geo. H. Mehner, Flatonia; J. D. Mosel, Kerrville; R. H. Norris, Jr., Detroit; H. H. Packer, Lampasas; Mrs. E. Picket, Big Wells; H. S. Strain, Ballinger; C. R. Thaxton, So. San Antonio; Jos. P. Turner, Greenville; Eugene E. Yates, Stamford; L. E. Bolado, McAllen; Mrs. M. H. Breininger, Dilley; W. A. Clark, Jr., Remlig; W. H. Dickinson, Bowie; S. T. Garcia, El Paso; H. H. Haller, Nashville, Ark.; E. A. Henegar, Gordon; E. J. Hueston, San Antonio; H. S. Legett, Livingston; Thos. Matthews, Howland; Cecil G. Moody, San Antonio; H. S. Nance, Huntsville; Edgar B. Oliver, Longview; C. H. Payne, Turkey; Annie Saccar, Hallettsville, R. C. Sweeney, San Antonio; H. M. Thompson, Linden; J. B. Warren, Sulphur Springs.

W. H. Cousins, a member of the board, was not present at the examination owing to the annual meeting of the National Association of Retail Druggists which was held in New Orleans on the same date. Mr. Cousins presided at the several sessions of the latter organization, and his colleagues on the board of pharmacy sent him a telegram extending their best wishes and congratulations. The correspondence between Secretary R. H. Walker and Surgeon General Gorgas concerning the commissioning of qualified druggists was read and endorsed by the board.

The next meeting of the board will be held at Fort Worth on Jan. 14, 1919.

PENNSYLVANIA

At the examinations of the Pennsylvania Board of Pharmacy held in Williamsport on August 30 and 31, 50 applicants appeared, 27 for pharmacist certificates, and 27 for assistant pharmacist certificates. Those successful were as follows:

Pharmacists—Frank A. Murphy, Altoona; Alfred W. Shoemaker, Allentown; David Nathanson, Pittsburgh; Peter Cramer, Edward S. F. Quinn, Chester; C. C. Turner and Goldie Goldberg, all of Philadelphia; Chester J. Crowl, Shamokin; Lloyd R. Goodhart, Reading; Vincent A. Egan, Plymouth; J. W. Sackaloucas, Scranton; Frederick R. Pritchard, Kingston; Harold W. Griesing, Hazleton.

Assistant Pharmacists—Anna Ostroff, Norman L. Glenn and Stanley F. Kaidasz, of Philadelphia; Ralph C. Forrest, Pittsburgh; Charles N. Koch, West Hazleton; Lewis Klein, South Bethlehem; Lester F. Widmann, Lock Haven; Walter W. White, Shenandoah. Gerard S. Mest, Allentown; Frank M. Coad, Blairsville; Edwin T. Brown, Philipsburg; Victor Charles Dettis, Trafford.

The next examination of the board will be held on Nov. 8 and 9 at the Philadelphia College of Pharmacy, 145 North Tenth street, Philadelphia, and at the Pittsburgh College of Pharmacy, Pride and Bluff streets, Pittsburgh.

A NEW CALCIDIN PREPARATION

The Abbott Laboratories, Chicago, Ill., announce a new Calcidin preparation, a delicious, licorice-flavored troche, which they report is already selling tremendously and the sales of which are bound to increase. Calcidin Troches are offered not only in bottles of 100 or more, but also in handsome, lithographed tin boxes, containing twenty-four, to retail at $1.70 per box. In view of the intensive use of this remedy by the medical profession, and its growing popularity, Calcidin Troches are sure to have a ready sale, and druggists will do well to put in a supply. All jobbers carry stocks.

Women in Pharmacy

CONDUCTED BY EMMA GARY WALLACE

WOMAN'S WORK IN PHARMACY

By Miss JULIA E. EMANUEL, Ph. C.,
Ft. Wayne, Ind.

(The following abstract of a portion of the address made by Miss Emanuel at the 50th Anniversary of the founding of the College of Pharmacy of the University, Ann Arbor, recently, will be read with considerable interest as coming from a graduate in pharmacy and one who has attained success as the proprietor of a well-known pharmacy. Miss Emanuel graduated from the University in 1889, and after gaining experience as a prescriptionist in the pharmacy of Meyer Bros. & Co., Ft. Wayne, started in business on her own account.—Editor).

"When I speak of women in pharmacy, I mean those who are actively engaged in the retail drug business, and my regret is that I have so few to talk about. Women in pharmacy are very opportune at this time when so many registered pharmacists have been placed in class one. If a woman can release one man for the firing line, she is serving her country equally well.

"Looking over the lists of graduates of the various schools and colleges one scarcely finds a class without the names of one or more ladies, yet now the demand for them is so great we rise and ask, "Where are they now?" The druggists of the past are indirectly responsible for the scarcity of available registered women. None would employ a woman without she had practical experience or was registered, yet how was she to get experience in a drug store if no one would give her a chance? As a result of this attitude, the few women who would elect to follow pharmacy would only work about a year, then marry, and also, advise other girls not to take up pharmacy.

"Among the reasons given for not employing women in pharmacy is that there are so many things a woman will not do. Now, the woman who succeeds in pharmacy can and will do anything that a man will do, except, perhaps, handling crates and such things, work that men themselves often get someone else to do for them. Another reason against the employment of women is that a woman spends too much time "primping;" possibly she does use face powder, or even rouge, if she needs it, but it takes no longer to use these articles than it does to smoke a cigar!

"Almost every day a stranger will enter our store and speak of its attractiveness, adding that it is the first time he has ever been in a drug store conducted by a woman, although he travels from coast to coast. Invariably he will say that one can tell a woman is in charge. Women are prenatally housekeepers, and after all, it is only good housekeeping that makes clean, attractive drug stores.

"The attractiveness that attracts is a very valuable asset to any store. The items in a toilet goods and sundry department are naturally attractive, and with a little thought and care, such goods can be used to display advantage. Just a few flowers properly placed are most effective, the ordinary flowers being more attractive than the hot house plants. What is prettier than the butterfly weed or the tansy? Both are wonderfully brilliant in color. Gather some poison ivy vines in December and see how many customers will ask what they are!

"The morale of a store is even better where women are employed. I do not mean that it is so because of the more or less attractive girl at the cigar stand or because of the presence of the hennaed demonstrator; but I do mean that the store is better because of the graduate in pharmacy, the girl of high ideals who has her place in the prescription and drug department.

"Now girl graduates! don't allow men to do your work just because you are women. Men have their work to do, and you are absolutely capable of taking the initiative in any work without requiring some one to wait upon you. There are two essentials needed for your success—optimism and low-heeled shoes; you can't get along without either.

"Women are alert, sympathetic and obliging, and the public will go further for service than they will for prices. Women are in pharmacy not to develop competition, but to cooperate for a better and a more attractive pharmacy. And I'm absolutely certain they will 'carry on.'"

AROUND THE CIRCUIT

Mrs. Nellie Florence Lee, financial secretary of the W. O. N. A. R. D., is making a somewhat extended trip following the New Orleans convention. First she visited at Mrs. Dave Bower's of Mobile, Ala., going from there to see her son, Dr. Walter E. Lee, a captain at Fort Oglethorpe, Ga. Her next stop was Louisville, Ky., where she was the guest of honor of Chapter No. 11. She spent some time in Cincinnati and from there expects to go to Indianapolis and Chicago. These trips by Mrs. Lee make for a fine degree of enthusiasm in the year's work of the organization.

Mr. and Mrs. J. H. Riemenschneider spent a restful vacation week at French Lick, Ind., following the New Orleans convention. Mr. Riemenschneider was especially in need of time to recuperate after a hard season of work marked by shortage of help.

Mr. and Mrs. Adolph Umenhofer of Chicago visited Chattanooga, Tenn., on their way home from New Orleans. Both were delighted with the beautiful scenery native to the place, and somewhat surprised that the German prisoners held at the near-by camp are having such a thoroughly comfortable time.

Mr. and Mrs. C. P. Gladding and daughter, Miss Mary, of Hartford, Conn., in spite of the danger of submarines, made the return trip from New Orleans to Boston by boat. An enjoyable trip is reported.

Congratulations are extended to Mr. and Mrs. Charles Rubens, of Chicago, who are rejoicing over the birth of a daughter.

Mrs. Henry Wagner, president of Cincinnati Chapter No. 5, has been very anxious about her husband and younger daughter, both of whom have been ill, but are now convalescent.

Mr. and Mrs. Eugene Selzer, of Cleveland, Ohio, are enjoying a trip to Los Angeles and San Diego, where they are visiting relatives and friends. Mrs. Selzer is president of W. O. N. A. R. D. Chapter No. 21, Cleveland.

The sympathy of members of the W. O. N. A. R. D. is extended to Mr. and Mrs. H. C. Clapham and Mrs. John Hartman Clapham and little daughter of Philadelphia, upon the occasion of the sudden and sad death of John Hartman Clapham, son, husband, and father. Mr. Clapham was taken with influenza which developed quickly into pneumonia, the end coming very soon. Mr. Clapham leaves a brother, besides his wife, daughter and parents. Mrs. H. C. Clapham is charter member of Philadelphia Chapter, No. 6, and one of its past presidents.

Mrs. Caroline Wetterstroem of Cincinnati, who has until recently been on the staff of the Queen City College of Pharmacy, is taking an active and prominent part in the local Red Cross work.

Reports from many of the Colleges of Pharmacy show an unusual number of women registrants.

Chicago Chapter, No. 2, is taking a most active part in the Fourth Liberty Loan. Mrs. C. R. Walgreen is chairman of the committee having the whole matter in hand. Mrs. B. A. C. Hoelzer is captain of the women workers. Mrs. Maude Hirsch Corkin is her assistant. The following are the campaign lieutenants: Mesdames Rauchert, Topf, Norton, Moffett, Sisson, Delprat, Warner, Deer, Moyer, Krizan, Hartke, Hirsch, Frank Forbrich, Meyer, Schulte, Golden, and Wulz. Shorter period lieutenants are: Mesdames Geispitz, Ralphs, Crowley, Burhop, Zindt, Abrahamson, Burman, Schulte, Schick, Weireter, Light, McDonald, Fechter, Fry, Zoeller, Wahl, and Haering.

Mrs. Annie F. O'Conner. of Claremont, N. H., was accidentally killed by gas poisoning recently. She has been in charge of her husband's drug business since his death.

Mrs. J. J. Sieberz, the newly elected president of the W. O. N. A. R. D. has made the following committee appointments for the ensuing year:

Fraternal Relations: Miss Elenor Diehl, chairman, 932 Cherokee Road, Louisville, Ky; Mrs. A. J. Schnaidt, Parkston, S. D.; Mrs. J. Leyden White, New York city; Mrs. J. F. Waterhouse, Newton Highlands, Mass.; Mrs. Miles H. Shimer, Philadelphia, Pa.; Miss Ruth Sparks, Burlington, N. J.; Mrs. Curtis Gladding, Hartford, Conn.; Miss Edith Hindman, Durkee, Ore.

Auditing Committee: Mrs. J. C. Mead, chairman, Indianapolis, Ind.; Mrs. Chas. R. Walgreen, Chicago, Ill.; Mrs. H. F. Cohn, Louisville, Ky.; Mrs. Herman Lambeck, Milwaukee, Wis.; Mrs. Carl Winter, Cleveland, Ohio.

Educational Committee: Miss Mary Fein, chairman, Little Rock, Ark.; Mrs. Edward Ferger, Indianapolis; Mrs. J. H. Riemenschneider, Chicago; Mrs. Henry Wagner, Cincinnati; Mrs. William E. Lee, Philadelphia; Mrs. A. W. Pauley, St. Louis; Mrs. J. W. Sutton, Mobile; Mrs. Louis Emanuel, Pittsburgh; Mrs. S. E. May, Louisville; Mrs. Oscar Draper, Wilmington; Mrs. A. J. Riess, Rock Island; Miss Ruth Sparks, Burlington, N. J.; Mrs. Herman Lambeck, Milwaukee, Wis.; Mrs. Eugene R. Selzer, Cleveland; Mrs. Christian Schertz, New Orleans.

Committee on Constitution and By-Laws, (composed of Chapter Presidents): Mrs. William E. Lee, chairman, Philadelphia; Mrs. J. H. Riemenschneider, Chicago, Ill.; Mrs. Henry Wagner, Cincinnati, Ohio; Mrs. J. W. Sutton, Mobile, Ala.; Mrs. Louis Emanuel, Pittsburgh, Pa.; Mrs. A. W. Pauley, St. Louis, Mo.; Mrs. S. E. May, Louisville, Ky.; Mrs. Oscar Draper, Wilmington, Del.; Mrs. Edgar R. Sparks, Burlington, N. J.; Mrs. Herman Lambeck, Milwaukee, Wis.; Mrs. Edw. Ferger, Indianapolis, Ind.; Mrs. E. R. Selzer, Cleveland, Ohio; Mrs. Christian Schertz, New Orleans.

Miss Laura Johnson, a registered pharmacist, is serving acceptably with the Central Drug Store, Port Huron, Mich.

The officers nominated for the coming year to serve Queen City Chapter No. 5 are: President, Mrs. H. Wagner; first vice-president, Miss Dieringer; second vice-president, Mrs. C. L. F. Cramer; secretary, Mrs. MacElhany; treasurer, Mrs. Herman Igler; board of control, Miss Meyers and Mrs. Louis Werner. The election and installation of officers will be held at the home of Mrs. John Werk, Edwards Road, Hyde Park, at the next and last meeting of the season.

The Burbank Pharmacy of Burbank, Cal., has engaged the services of Miss Helen Matthewson.

The San Francisco Ladies Auxiliary held its annual meeting at the Hotel Whitcomb. The following officers were elected for the coming year: Mrs. J. B. Winslow, president; Miss Pauline Nast, vice-president; Mrs. K. Bowerman, secretary; Mrs. J. H. Dawson, treasurer. The hostesses of the occasion were Mrs. S. A. McDonnell and Miss Ada B. McDonnell. A delightful luncheon was enjoyed and after that card games occupied the time.

LAWS FOR WOMEN CLERKS

There has been considerable controversy of late as to the number of hours women pharmacists could work in drug stores where employed. While in Madison, Mayor Thiesen, who is at the head of the Red Cross Drug Stores in Racine, Wis., took up the question with the State Industrial Board. Recently he received a letter from the Industrial Commission, F. E. Witte, secretary, advising him that the following order had been entered, which under the terms of the law, will become effective October 20, 1918.

"Order No. 6—Registered women pharmacists and registered assistant pharmacists shall be exempt from the restrictions upon the hours of labor of females contained in sections 1728-1 to 1728-4, inclusive, of the statutes and the orders of the Industrial Commission issued pursuant thereto.

"You will note that the order of the commission exempts women pharmacists and registered assistant pharmacists from the women's hours of labor law. This does not apply, however, to women clerks in drug stores, who are not registered pharmacists or registered assistant pharmacists."

PHARMACISTS IN THE FRENCH NAVY

According to the London "Chemist and Druggist," the "Journal Officiel" publishes the conditions under which third-class auxiliary pharmacists serving in the French Navy will be admitted to second-class rank. They must either be graduates of the special School of Naval Medicine and Pharmacy at Bordeaux, or satisfy certain conditions as to length of service—three years' military service for those who have studied for two years previous to the mobilization in 1914; four years' for those who had only studied one year. They will only receive second-class rank as vacancies occur, and if they pass the examination of which the Ministerial "Instruction" gives details. The physical sciences examination is of a general character. The chemical examination covers the analysis of wine, water, milk, urine, etc.; while the pharmacy examination is based on the Codex and the Military Hospital Formulary.

Credit and Commercial Case Decisions

By GEORGE H. MURDOCH, New York, N. Y.

Bulk Sales Law—Under the bulk sales statute (Comp. Laws 1913, § 7226) a sale of merchandise in bulk is void as to creditors unless made in the prescribed manner. When not so made, the goods of the debtor become a trust fund for the benefit of his creditors, and the purchaser becomes a trustee for the benefit of the creditors.—167 N. W. (N. D.) 326.

Honorary Directors—A director in a financial institution must exercise the same degree of care that men prompted by self-interest generally exercise in their own affairs, to know how the business is conducted, and to give direction to its affairs, and is not excused by the fact that he is a mere honorary director, and is not expected to give the business any attention, and is liable to stockholders for losses occasioned by neglect.—119 N. E. (N. Y.) 237.

Testamentary Capacity.—Less mental capacity is required to make a will than to make contracts.—167 N. W. (Mich.) 937.

Right to Sue on Note.—A party who merely holds a note for collection may bring action thereon, where the legal title stands in him.—167 N. W. (S. D.) 499.

Suit by Partnership.—A partnership cannot sue as such, but must sue in the name of the individual partners.—170 N. Y. S. 354.

Good Will of Partnership.—The good will of a partnership is an asset in which the heirs and representatives of a deceased partner are entitled to share. —119 N. E. (Ill.) 630.

Doubts in Meaning of Insurance Contracts.—An insurance contract must be liberally construed in behalf of the insured, so as to effectuate its purpose, and doubts are to be solved in his favor.—119 N. E. (Ind.) 532.

Mailing Notice of Protest.—A notice of the protest of a note, properly addressed and left in the place in the notary's office, where mail was usually collected by the postman, was not a mailing of the notice as required by statute.—103 A. (Pa.) 731.

"Accident" Within Meaning of Compensation Law.—The word "accident," as it occurs in the Workmen's Compensation Act, is used in its popular sense, and means any unlooked-for mishap or untoward event not expected or designed.—119 N. E. (Ind.) 519.

Stockholder's Right to Examine Corporate Books.—A corporate stockholder has the right to examine his company's books in good faith by employing a disinterested expert accountant not connected with the company to assist him in making the examination.—103 A. (N. J.) 813.

Verbal Inaccuracies in Contract.—Where a contract is ambiguous, the true intention of the parties, if it can be ascertained therefrom, prevails over verbal inaccuracies, inapt expressions, and the dry words of the stipulation.—172 P. (Okla.) 634.

Countermanding Certification of Check.—Where a bank is induced by fraud to certify the check of a depositor in an amount in excess of his deposit, it may countermand payment, unless the rights of other parties have intervened.—203 S. W. (Mo.) 674.

Bank's Priority over Depositor's Creditors.—Where a borrower, being heavily indebted to a bank, had agreed that the proceeds of shipments by it were to be applied on such indebtedness and the borrower had sent the bank a draft on consignee of goods sold with bill of lading attached, the bank, since it had the right to hold the bill of lading as collateral security for payment of the draft, had a special interest in the consigned property to the extent of the amount of the draft, taking precedence over an attachment under writ of garnishment on judgment against the shipper.—172 P. (Ariz.) 656.

Responsibility of Carrier.—A common carrier of goods insures their safe delivery to the consignee against loss of injury from whatever cause arising, except only the act of God, the public enemy, or some other cause which would exempt it from liability at common law.—167 N. W. (Nebr.) 574.

Public Demand for Fast Trains.—The demand of the public for fast trains is to be considered in determining whether defendant railroad was guilty of gross negligence in fixing the running time of a train between two stations, so as to cover a mile and a quarter in four minutes.—103 A. (N. H.) 660.

Right of Privacy.—The exhibition in a moving picture theater of the photograph of a person taken without her consent and for the purpose of exploiting the publisher's business is a violation of the right of privacy and entitles her to recover without proof of special damage.—172 P. (Kans.) 532.

Dealing with Corporation Notes.—A payee giving up the personal note of the president of a corporation and receiving the corporation's note instead, is presumed to know that an officer may not bind the corporation, where his interests are adverse, without its knowledge and consent.—172 P. (Wash.) 573.

Seller's Failure to Move Goods Refused.—Under contract of sale providing that, if the material vary from the specifications, the seller is to be immediately notified, and is to immediately remove the material, and repay buyer, with expenses, the seller refusing to remove the material, the buyer need not store it indefinitely, but may dispose of it by auction sale.—170 N. Y. S. 345.

Renewal Privilege in Lease.—Where lease for ten years gave tenant privilege to renew for an additional period of ten years by notice in writing, the exercise of the privilege renewed the lease for ten years, and a new lease was unnecessary; the word "renewal" and the words "to renew" not having a fixed legal significance to which parties are bound.—119 N. E. (N. Y.) 552.

European War as Public Calamity.—In the spring of 1914 bankrupt, an opera company, contracted for the services of claimant as a musician for the ensuing opera season in Boston, commencing in the following December. The contract contained a provision that "in case of riot, fire, railroad accident, public calamity, or other casualties, over which the party of the first part has no control, this contract may be canceled at the option of the party of the first part." In November bankrupt notified claimant of the cancellation of the contract, on the ground that the general state of war existing in Europe made it impossible to maintain opera in Boston during the season. Held, that such war, although the United States was not then a party to it, was a public calamity and casualty over which bankrupt had no control, within the meaning of the contract, and so affected the performance of opera in Boston as to justify its abandonment and the cancellation of the contract.—249 F. (Mass.) 269.

PROTEST CHANGE IN NARCOTIC ACT

National Drug Trade Conference and N. A. R. D. File Statements With Senate Finance Committee—Repeal of Section 6 Declared Unjustifiable

The National Drug Trade Conference has filed a statement with the Senate Finance Committee regarding the proposed amendment to the Harrison Anti-Narcotic Law, pointing out the objectionable features, The statement says in part:

"The pending bill proposes to strike from the law that provision which permits the sale and possession, without complying with the other provisions of the Act, of medicinal preparations containing not more than two grains of opium, one-fourth grain of morphine, one-eighth grain of heroin or more than one grain of codeine, or any salt or derivative thereof in one ounce of mixture.

"The reason set forth in the report for the repeal of this section is that 'it has been found that the exemption has made the adequate enforcement of the Act almost impossible, and that many preparations are marketed which contain lawful amounts of the drugs, but which are of great harm to the consumer.'

"The two reasons, or rather the two excuses, set forth are really but one reason, because, if adequate enforcement of the Act is possible, the preparations containing lawful amounts of drugs cannot be sold in such quantities as to do great harm to the consumer, and, on the other hand, if preparations containing lawful amounts are marketed in such quantities as to do such harm to the consumer, there has been no adequate enforcement of the Act.

System of Regulations

"All that is necessary to enforce the conditions imposed in Section 6 is for the Commissioner of Internal Revenue, with the approval of the Secretary of the Treasury, to formulate a proper system of regulations interpreting the effect of Section 6.

"On behalf of the National Drug Trade Conference, Dr. J. H. Beal submitted to the Commissioner of Internal Revenue a basis for such a system. I submit herewith the first two paragraphs of this basis:

> The exemptions in section six of the Act of Congress approved December 17, 1914, apply exclusively to preparations and remedies which are sold, distributed, given away, dispensed or possessed strictly in good faith for medicinal purposes only, and not for the purpose of evading the intentions or provisions of the law, whether such preparations and remedies are dispensed on prescription or otherwise. The selling, dispensing, etc., of any preparation for the purpose of satisfying or of ministering to a drug-habit is not a selling or dispensing for medicinal purposes within the intention of the law.
>
> The preparations and remedies within the intent of section six are hereby defined to be compound preparations or mixtures which contain the enumerated drugs—in quantities not greater than those specified—together with other active medicinal drugs in sufficient proportions to confer upon such combinations valuable medicinal qualities other than those which would be possessed by the narcotic drugs if dispensed alone. Simple dilutions of a narcotic drug made by admixture with inert or nearly inert substances, as sugar of milk, etc., or simple solutions of a narcotic drug in water, syrup, diluted alcohol, flavoring matter, etc., are not bona fide medicinal preparations within the meaning of the section.

No Need to Repeal Section 6

"Such a regulation would have been clearly within the power of the Commissioner to publish. If the above regulations had been adopted and if the Treasury Department had been as active in enforcing the law and the regulations as some of the representatives of that Department have been active in seeking the repeal of Section 6 and in seeking to secure a limitation of sales, containing minimum quantities, to registered physicians, so many of whom have been disclosed by the Commissioner of Internal Revenue to be violators of the law, there would be no occasion whatever for the repeal of Section 6, and these simple remedies could be preserved to their proper sphere of usefulness and remain the proper instruments for the alleviation of suffering without the intervention of the physician.

"A further consideration is the fact that practically all the States of the Union have embodied in their narcotic laws provisions similar to those of Section 6, and the result of the repeal of the Harrison Law would be a virtual repeal of the expressed will of the people of the States as it has been embodied in their State laws."

Statement of N. A. R. D.

The National Association of Retail Druggists, through its general attorney, E. C. Brokmeyer, recently sent a brief to the Senate Finance Committee, protesting against the proposed amendment of the Harrison Narcotic Act. The amendment, in the form of a "rider," has been attached to the pending revenue bill without notice to the drug trade and pharmacy. That part of the Harrison act which it repeals is as follows:

> Section 6. That the provisions of this act shall not be construed to apply to the sale, distribution, giving away, dispensing or possessing of preparations and remedies which do not contain more than two grains of opium, or more than one-fourth of a grain of morphine, or more than one-eighth of a grain of heroin, or more than one grain of codeine, or any salt or derivative of any of them in one fluid ounce or, if a solid or semi-solid preparation, in one avoirdupois ounce; or to liniments, ointments or other preparations which are prepared for external use only, except liniments, ointments, or other preparations which contain cocaine or any of its salts or alpha or beta cucaine or any of their salts or any synthetic substitute for them;
>
> Provided, that such remedies and preparations are sold, distributed, given away, dispensed or possessed as medicines and not for the purpose of evading the intentions and provisions of this act.

The language in the latter part of this section was used by Congress to make it impossible for any person to abuse the exemption provisions of Section 6 without subjecting himself to the penalties of the law and if the Treasury Department has had evidence of abuses of the law, it should be called upon to explain why this evidence had not been furnished the Department of Justice for purposes of prosecution.

The communication from the National Association of Retail Druggists contends that the repeal of Section 6 would nullify one of the purposes of the International Opium Convention which is "to limit the manufacture, sale and use of morphine, cocaine and their respective salts to medical and legitimate uses only." It would seriously interfere with, rather than limit, the manufacture, sale and use of narcotic drugs for such purposes and it also would conflict with a resolution in House Report No. 23, 63d Congress, 1st session, which states that "there is a real and desperate need of Federal legislation to control foreign and interstate traffic in habit-forming drugs."

The National Association of Retail Druggists, representing more than fifty thousand drug stores in the United States, asks that if Congress sees fit to amend the Harrison act, it should be done through legislation independent of revenue legislation after careful consideration of the subject and a fair opportunity for the organized drug trade to be heard.

CHRISTIAN GARVER RETIRES

Christian Garver, a former president, and for many years treasurer of the Illinois Pharmaceutical Association, as well as a pioneer pharmacist of Bloomington, Ill., has announced his decision to retire from business. He entered pharmacy as a drug clerk at Monticello 53 years ago, and two years later started a drug store in Farmer City. In 1884, he went to California where he engaged in the same business for a year, and then returned to Bloomington where he since conducted a drug store at 201 East Front street until three years ago, when he moved his store to 101 East Front streeet. He was one of the first pharmacists in Bloomington.

GOVERNMENT CORPORATION SUGAR TRADERS

Formal announcement was made in Washington recently of the organization of a corporation to deal in sugar. The company will be financed by the United States Government and officered by the members of the Food Administration. Its purpose is to save money for sugar consumers by buying the output of various producers at a fair margin above cost of production and equalizing the differences between these rates so that the sugar can be sold at a lower price than otherwise would be possible.

It is expected that one of the first purchases of the new corporation will be a part of the California beet sugar crop.

A new feature of the plan is the decision to have the Sugar Equalization Board take over the distribution of supplies under the regulations that went into effect the first of July. This board has as its chairman Herbert Hoover, and its offices will be in Washington.

The purposes of the board are to equalize the cost of various sugars and secure better distribution. Such arrangements will facilitate joint dealings with the Allies in foreign sugars and aid the adjustment of differentials in overseas freight rates. The board will be incorporated to the extent of $5,000,000 of capital which will be supplied by the President from his special funds and the whole stock will be held by him for the United States Government.

It is expected that the price of sugar will need to increase in view of the increased costs of overseas and internal railway rates, and of the higher cost of production and manufacture. By the creation of this board, however, it will be possible to work out a price for the public upward of one cent per pound less than would be the case if the price were advanced to a price covering the high peaks in costs from all quarters.—*Facts about Sugar.*

PHYSICIANS CO-OPERATE WITH DRUGGISTS

Active and helpful co-operation of pharmacists and physicians was brought much nearer through the action of the Minnesota State Medical Association when its house of delegates at the annual convention in Duluth, Minn., recently, adopted a resolution providing that a delegation of five physicians attend the next meeting of the Minnesota State Pharmaceutical association to be held in St. Paul in February.

According to another resolution adopted, when the medical society's legislative committee is appointed, this committee will be instructed to co-operate with the legislative committee of the pharmacists' association.

The action of the convention followed a speech by H. Martin Johnson, a St. Paul druggist, whose topic was "Co-operation." Mr. Johnson, as member of the pharmacists' committee attending the medical convention, was given the privilege of the floor of the House of Delegates. The other member of the committee was A. G. Wirth of Duluth.

A NEW INFLUENZA PREVENTIVE

McKesson & Robbins, Inc., 91 Fulton Street, New York, are calling the attention of the trade to Cin-u-form lozenges, useful in warding off influenza, grippe and colds. They contain cinnamon, eucalyptol, formaldehyde and menthol, all powerful germicides against influenzal bacilli, but not injurious to the system in this palatable form.

Cin-u-form lozenges are put up 25 to the bottle, the list price being $2.00 per dozen. They form a splendid prophylactic for the mouth and throat and are recommended especially for use by people traveling in street cars, and in theaters and other crowded places.

Re-Educating Crippled Pharmacists

The Federal Board for Vocational Education which has been designated by Congress to re-educate the disabled men of the army and navy is now engaged in that work and as the men come from France and are assigned to the various hospitals, the vocational advisers representing the Board get in touch with these men where it is apparent that vocational re-education is needed and preparations are made even while the men are in the hospitals to give them the sort of training best suited to their disabilities and inclinations.

The general impression seems to be regarding vocational re-education that it is necessarily confined to the manual trades. This is not at all the case and in the general scheme, consideration has been given to the training of men along pharmaceutical lines. The drug trade offers many opportunities for men who have been compelled on account of injury to abandon their former method of livelihood and it will be utilized fully whenever the occasion seems to warrant. The re-education of some of these men as prescription clerks and as drug clerks appears to be a popular idea in some quarters and others will be trained as manufacturing chemists and their assistants. This training will be thoroughly practical and in administering it approved schools of pharmacy will be utilized as well as practical experience given in the actual work in drug stores and in chemical manufacturing plants.

There is another branch of re-training which offers opportunities to the disabled men who are compelled, by reason of their injuries, to lead an outdoor life with not very strenuous endeavor, and that is the growing of medicinal herbs and roots. Tuberculosis thus far, as the records of the War Risk Insurance Bureau discloses, is the greatest cause of disability, the percentage of claims for compensation on account of this disease being 36 per cent of the total as the September statement shows. These men must be given outdoor occupations in the majority of instances and those who desire to specialize upon the growing of medicinal roots, plants and herbs will be given that opportunity. It presents very attractive features as distinguished from the ordinary market gardening and other branches of agriculture which are generally overcrowded. In the growing of these medicinal plants those engaging therein will be sure of good results and would not be subject to the amount of competition there is in other lines.

The Federal Board for Vocational Education at Washington publishes a magazine called the "Vocational Summary" which gives information about its activities, not only in the re-training of soldiers, but in promoting vocational education in other lines. The magazine will be sent free to those who address the Board and request it.

MAKING AMMONIA BY NEW PROCESS

The largest experimental plant in the United States for the manufacture of fixed nitrogen from the air, with the exception of the ones now being constructed for the War Department is in operation at the Department of Agriculture Experiment Farm, Arlington, Va. At this plant the nitrogen from the air is combined with hydrogen to form ammonia which can be used in the manufacture of explosives and fertilizer.

Experiments are now being conducted at this plant by the Bureau of Soils with a view to increase the efficiency of the process. What is known as the Haber process of nitrogen fixation is being used. This process involves the production of ammonia from hydrogen and nitrogen. The two gases are mixed in the proper proportions, put under high pressure, subjected to intense heat and passed over spongy iron, whereupon a portion of the mixture combines to form ammonia.

TWENTY YEARS OF SUCCESS

Lee Hagan

Twenty years ago a very young expert in fountain syrups down South conceived the idea of making a soda drink in extract form, marketing it for the fountain owners to manufacture into their own syrups. This idea, which made available a kola drink condensed in bulk, easily and cheaply transported and supplying a satisfactory fountain syrup, immediately won great popularity in Georgia and adjacent Southern States. Afri-Kola, as this extract was called, now enjoys a national distribution, the operations of the manufacturers having gradually expanded under the wise direction of the president, Lee Hagan.

On October 1, the Afri-Kola Company moved to a large three-story and basement brick building double the size of the old factory. The new plant, which will be devoted exclusively to the manufacture of Afri-Kola extract, is located at 104 Edgewood avenue, near the famous Five Points in Atlanta, Ga. In this successful development Mr. Hagan has been the prime mover, and his many friends in the trade are congratulating him on this very tangible evidence which has crowned his efforts. As a pioneer in demonstrating the idea of selling a kola drink in extract form rather than as a syrup, his success has been phenomenal, and his product now enjoys a wide distribution.

"ACEY" BRAND

A. C. Smith, of Windsor, Ont., and Detroit, Mich., who justly calls himself the pioneer dealer in fine chemicals, has requested us to call the attention of our readers to his new line of "Acey" specialties. He is putting out this new line in attractive cartons and bottles with handsome labels printed in light blue and red. He is selling these entirely through the drug trade. He puts up his Aspirin tablets in slide boxes of 12 and 25 each, as well as in bottles of 100 or more; Phenolphthalein Wafers in small boxes as well as in larger packages; Papaya Dyspepsia Tablets in slide boxes and in bulk. He makes particular claim for his P B Q Cold and La Grippe Tablets.

The above are but a part of an attractive line of pharmaceutical specialties that he is now putting out for the drug trade, and he invites correspondence from druggists. His particular claim is to supply druggists with these goods so that they can make more profit on them than on any other similar goods which they are handling.

All goods are shipped direct from his warehouse in Detroit, and correspondence should be addressed to A. C. Smith, P. O. Box 1374, Detroit, Mich.

LIVEZEY PURCHASES J. & J. CATHETERS

Henry Livezey, 198 Broadway, New York City, has purchased the entire stock of catheters and similar goods heretofore manufactured by Johnson & Johnson, the latter concern having given up entirely the manufacture of these goods. Mr. Livezey will continue the sale of this stock and has arranged to have such goods manufactured. He will carry a complete stock of all styles and sizes in the various lines of Catheters, Bougies, Colon, Rectal, and Stomach Tubes.

Mr. Livezey also announces that he has purchased the imported French Silk Catheters formerly handled by Van Horn & Sawtelle Company, and bought by Johnson & Johnson. He will also continue handling a line of Elastic Hosiery, Supporters and Trusses, and in addition, is acting in many cases as purchasing agent for out-of-town customers who are looking for some article the manufacturer of which they are unable to locate.

DR. WERNET'S POWDER IN NEW DRESS

The H. R. Lathrop Company, which has so successfully interested the public in Gold Medal Haarlem Oil Capsules, has taken over the well-known Dr. Wernet's Powder for False Teeth and created new interest in that product. An entirely new and tasteful metal container in colors is to take the place of the old-fashioned cardboard box formerly employed, and the boxes will be shipped in a display container of the very latest design. The marketing of Dr. Wernet's Powder is being preceded by a newspaper campaign extending throughout the country, the success of which is assured, as the Lathrop Company is keenly alive to every need of the situation and will do everything necessary to create the demand and also to promote it.

The War Department has just approved the request of the Director of Chemical Warfare Service to furlough back to approved institutions a limited number of teachers of chemistry. This furlough will be administered by the Committee on Education and Special Training, old Land Office Building, Washington, D. C., upon recommendation of the officer in charge of university relations, Chemical Warfare Service.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912.

Of The Pharmaceutical Era, published monthly at New York, N. Y., for October 1, 1918, State of New York, County of New York—ss.:

Before me, a notary public in and for the State and county aforesaid, personally appeared D. O. Haynes, who, having been duly sworn according to law, deposes and says that he is the Business Manager of The Pharmaceutical Era, and that the following is to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse side of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor and business managers are: Publishers, D. O. Haynes & Co.; Editor, E. J. Kennedy; Managing Editor: N. W. Haynes; Business Manager, D. O. Haynes, all of No. 3 Park Place, New York, N. Y.

2. That the owners are: (Give names and addresses of individual owners or, if a corporation, give its name and the names and addresses of stockholders owning or holding 1 per cent or more of the total amount of stock.) D. O. Haynes & Co. and D. O. Haynes, 3 Park Place, New York, N. Y., F. J. Haynes, St. Paul, Minn., E. King, 15 William St., N. Y.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) There are none.

4. That the two paragraphs next above, giving the names of the owners, stockholders and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner, and this affiant has no reason to believe that any other person, association, or corporation has an interest direct or indirect in the said stock, bonds, or other securities than as so stated by him. D. O. Haynes, Business Manager.

Sworn to and subscribed before me this 1st day of October, 1918.

(Seal) G. H. RAYMOND, Notary Public, Kings Co., Certificate filed in N. Y. Co. (My commission expires March 30, 1920.)

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A BINDER
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Peace and the Edmonds Bill

The urgency of the need for the enactment of the Edmonds bill has not abated with the end of the war. There will always be an army in the United States and for the next few years, at least, that army will include a very important percentage of the men of the country. It is essential that those men receive the benefit of experienced and intelligent handling of drugs and medicines. This is their privilege in civil life and it should be theirs in the army, whether the country is at war or not. The duties of the soldier during the settling down period of the European nations will not be as arduous or as dangerous as while the armies were fighting, but they will be as important, and it is as necessary that he be kept in the best of health.

In addition, the status of the pharmacist in the United States army should be established, definitely and permanently. It is considered necessary that he be given a rating in the navy and the marine corps of this country, and he is dignified to that extent in the land forces of practically every other power in the world. The United States Army stands alone in its position. While this, in itself, may not constitute an adequate reason for changing, the fact that the authorities of other countries and in charge of the policies of our own navy and marine corps maintain pharmaceutical organizations indicates that they are necessary.

The Edmonds bill should be pushed with more energy than before.

Dispensing Venereal Remedies

During the past month the United States Public Health Service through Surgeon General Blue has been sending to the retail druggists of the country literature as a part of the Government's campaign to control venereal disease among the civilian population. In this literature druggists are asked to pledge themselves not to sell or dispense any medicines for the self-treatment of venereal disease, while physicians are asked to agree not to dispense such medicines, except when they cannot be obtained at a drug store, and further, not to prescribe or sell proprietary remedies marketed for self-treatment of the disease.

At first blush it might seem to some druggists that the Public Health Service had exceeded the limit of fairness to the drug trade when it asks druggists not to sell certain remedies which custom and law have permitted them to handle from the beginning of drug store history. But when the request is studied in the light of our present knowledge and from the viewpoint of public health, any attempt to curb the spread of the venereal scourge takes on a moral and humanitarian aspect that can not be ignored. The drug business has always borne a definite and important relation to the health of the community, and the responsibility of the druggist to the customer and to the community becomes all the greater when the druggist furnishes medicines for the self-treatment of diseases known to be dangerous to the individual or communicable to others.

Already several states have recognized the danger which might accrue from such a practice, and New York has a law which provides that no person other than a licensed physician shall treat or prescribe for a case of venereal disease, or dispense a drug, medicine or remedy for the treatment of such a disease. except on the prescription of a duly licensed physician. In South Carolina, the State Board of Health has adopted a regulation which goes still further in providing for the segregation and treatment of persons having or suspected of having communicable venereal diseases, which has been indorsed by the State Bar Association as being constitutional and not infringing on the liberty of the individual. These facts show that determined efforts are being made to control the ravages of this loathsome scourge, and the druggists of the country must do their part in educating the general public of the dangers of venereal disease and the complications that lurk in its trail. In giving their hearty support to the Governmeut's campaign to control venereal disease druggists will be working both for the best interests of the civilian population and for the greater fighting efficiency of the armed forces of the nation.

Returning to Pharmacy

In all the problems which the country will have to face in the reconstruction period already begun, pharmacists as citizens are deeply interested, for as business men they will have to do their share in providing the funds to be raised by taxation to pay war expenditures, the demobilization of armies and the return of soldiers to the ordinary avocations of peace. But more than this, pharmacists are awakening to the fact that the return to peace will bring them many special problems, the solution of which can yet scarcely be determined. In every direction there are bound to be readjustments, some of them which can only be made as the occasion presents itself, while others must be made as a result of individual initiative or by the joint co-operation of the pharmacists themselves.

The employment question in many industries is inseparably linked with business prospects, for there is plenty of work at home and abroad which ought to be done, and all reports indicate that the whole world is short on consumable goods and behind on construction work. To a large extent the pharmacist is interested in these phases of reconstruction as they may affect him in a general way. He is, however, deeply interested in the returning clerks and the place these men will fill in pharmacy after they have been discharged from the army. Will he get his former clerks back? Will they be willing to serve the long hours they formerly served behind the dispensing counter, or will they put up with all of the inconveniences some of them complained of before they went into the army? If these men do return to pharmacy what will the pharmacist do with the help he has assembled to keep the business going when his former assistants answered their country's call? These are questions that each will have to settle in one way or another and their right solution will call for tact of the highest order and the self-control of all pharmacists and their helpers.

What will be the professional outlook for pharmacy in the years soonest to come? If we can judge by the opinions of those who have most studied the probable situation, we can believe that the outlook is most promising. Hundreds of physicians will return to the practice of their profession on the demobilization of the army, and the training they have received in the service will tend to make them depend more than ever upon the scientific pharmacist for carrying out physiological and chemical tests, and many of them will never care to return to the rather unsatisfactory work of making these tests themselves. They will demand more and more of the pharmacist, and unless the latter equips himself to perform this work he will find himself the loser of patronage that under other circumstances might have been his.

It seems to us that one of the first evidences of a new order of progress will be seen in increased educational qualifications to practice pharmacy. In this movement colleges of pharmacy will have a great work to perform, and to readjust such institutions to the instruction that will be needed in the near future will call for facilities of the highest order. Pharmacy will always need drug clerks, but the greatest progress is bound to come from pharmacists of scientific attainments and the research workers who have faithfully and studiously carried out investigations made possible by thorough training in the high grade colleges of pharmacy. To cope with the competition and medicinal products of other lands, and to promote American business in foreign countries, will call for educational attainments of the highest order.

Index to Volume LI.

A complete index of Volume LI of The Pharmaceutical Era, covering the year 1918, has been prepared and is now ready for distribution. Complying with the request of the Government authorities for the practice of the greatest possible conservation in material, and especially for economy in the use of paper, the index is not included in this December issue which is the concluding number of Volume LI. However, copies of the 1918 index may be obtained by subscribers who will send their requests for the same to the publishers.

Extraction of Potash from Kelp

By C. A. HIGGINS, New York

In 1911 Congress made an appropriation to investigate the sources of potash supply in this country, but it was not until Germany had put an embargo on the exportation of potash from that country in January 1915, that a serious attempt was made to develop such an industry here. The principal sources of supply in the United States are the natural brines from Searles Lake, Cal., and the lakes of Western Nebraska; the giant kelp beds of the Pacific Coast, the alunite deposits of Utah, and the kiln dust of cement plants. Of these sources of production, the kelp beds of the Pacific last year produced about 11 per cent of the total potash recovered in the United States.

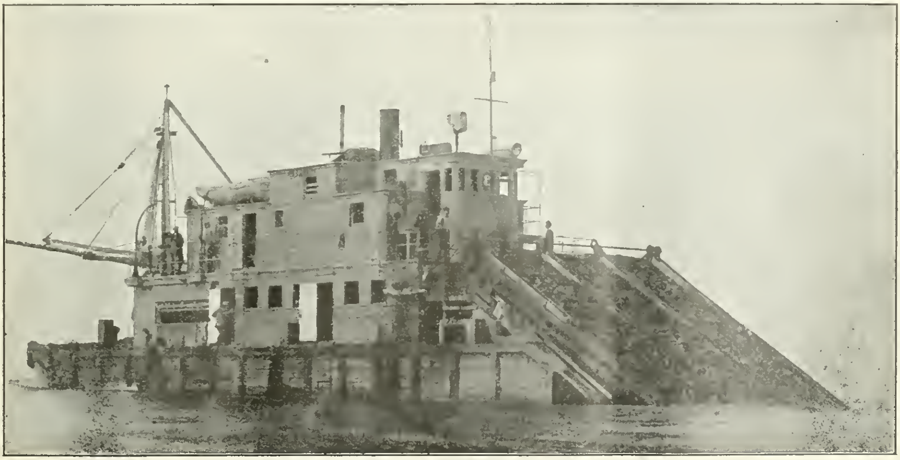
THE recovery of potash from kelp, and the utilization of kelp ashes, principally as a fertilizer, is an art that has long been practiced. Many centuries before the German Syndicate began to market potash salts from their Stassfurt mines, the crofters around the rocky shores of Scotland and the northern coast of France had burned the drift kelp as a fuel, and scattered the ashes over their land as a fertilizer. The great success which resulted from the use of this kelp ash on the land caused a rapid expansion in the business of kelp harvesting, until about the beginning of the 19th Century, quite a flourishing industry had already sprung up.

The opening up of the German potash mines, however, about the middle of the 19th Century, began to flood the markets with potash at a price far below that at which the old kelp burners could produce it, and although the kelp potash industry still struggled along in isolated parts of the coast among the Scottish crofters, and to some extent in Japan, it may be said that the German production killed the kelp industry, which had up to that time attained fairly considerable proportions.

The outbreak of the present war, however, drove potash users to look for new sources of supply, and naturally one of the first to come to their attention was kelp. Previous to the outbreak of the war many writers had drawn attention to the huge perennial beds of kelp which grow practically uninterrupted all along our coastal waters on the Pacific side, from the Mexican line to Alaska, and around the scattered groups of islands which lie close to the California shore. These vast fields of kelp seemed to offer inexhaustible supplies of potash, which according to the preliminary survey made by the Government, bade fair to supply far more than the normal requirements of our country for the indispensable muriate of potash. All that remained was to devise economical means for harvesting these vast beds and drying and reducing the kelp to a suitable condition for transportation and use as a fertilizer. Within a few months, therefore, of the cutting off of the German muriate, various large companies were prospecting the Pacific coast for suitable sites on which to erect plants for the harvesting and extraction of potash from the Pacific kelp.

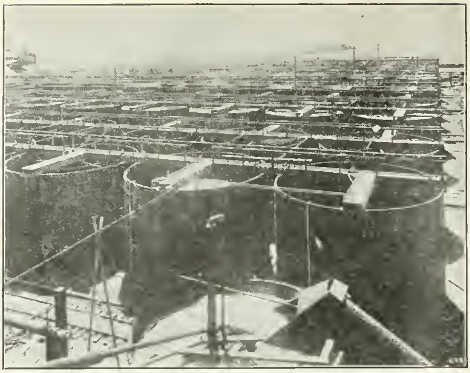
Early Attempts at Harvesting Kelp

The earliest attempts at harvesting were very crude and involved a good deal of manual labor. Men in flat bottom scows would reap the weed by hand with large sickle knives and burn it in a rather primitive way. The ash was afterwards sold



Harvester "Joplin" cutting kelp in Pacific coastal waters.

to the big fertilizer companies at a price based upon the potash content, which generally ranged about 15% K_2O. Later, however, modern methods were installed for the harvesting of kelp. Large flat bottom, steam or gasoline propelled scows were equipped with a mechanical reaping device and band conveyors which cut the kelp and conveyed it in one operation into the tanks aboard the harvesting vessel, at very much less expense than that involved in the old method of hand-cutting. These harvesters, when filled, then proceeded to shore under their own power and discharged their contents into hoppers at the plant, which in turn fed series of mechanical dryers, where the kelp leaves were dried and partly incinerated by passage through revolving drums heated by oil burners. The dried incinerated kelp leaves were then ground and sacked, and ready to be shipped to the fertilizer factory. Some attention is paid in the drying process to insure that a minimum of the potash and nitrogen content of the kelp is lost by the destructive distillation effect of the drying equipment. That, briefly, is the method now in use in plants where potash is considered as the only valuable constituent of the kelp. Experience has shown, however, that this process of producing potash and realizing the values of kelp is very expensive and will exist possibly just so long as the war and the present high price of potash last.


Digestion tanks from sterilizing building; wharf in background.

Production of By-Products Important Aid

A few figures will show the status of the kelp ash industry in this regard. Using the modern harvesting methods that I have already briefly touched upon, experience shows that it costs around $1.10 to harvest and bring a ton of kelp leaves ashore. Analyses show that the average potash content of the raw kelp as harvested in California coastal waters is about 1.3% K_2O, which means that it costs about $85 to bring in the green kelp equivalent to 2,000 lbs. 100% K_2O. On top of this, of course, has to be added the costs of drying these kelp leaves, which contain about 90% of moisture, and by reason of their gelatinous and cellular structure, present quite a problem in dessication. All indications seem to point very clearly to the fact, therefore, that any industry which looks to the production of potash from kelp on a permanent peace time basis, must reduce its costs very considerably, or produce valuable by-products in the same process which in turn will effect a reduction in the cost of the potash.

Along these lines certain investigators have suggested as far back as a century ago that the peculiar algin bodies present in kelp might be profitably recovered and used in certain directions in place of gelatin, for the sizing of paper and textiles, the proofing of cloth, and in the production of rubber substitutes and admixtures. Another interesting suggestion is that of Professor T. C. Frye, who made a conserve by first leaching out the potash and soluble salts and afterwards soaking the kelp in cane sugar solution flavored with lemon. In Japan a kind of sour pickle with vinegar is made from the fleshy parts of the kelp. The kelp fibre when compressed and dried also forms a hard substance resembling ebonite or vulcanized fibre, and at least one concern is working along these lines at the present time. The production of by-product iodine from kelp, however, has long been a practical proposition, although hampered somewhat by the competition of by-product iodine from the Chilean nitrate fields.

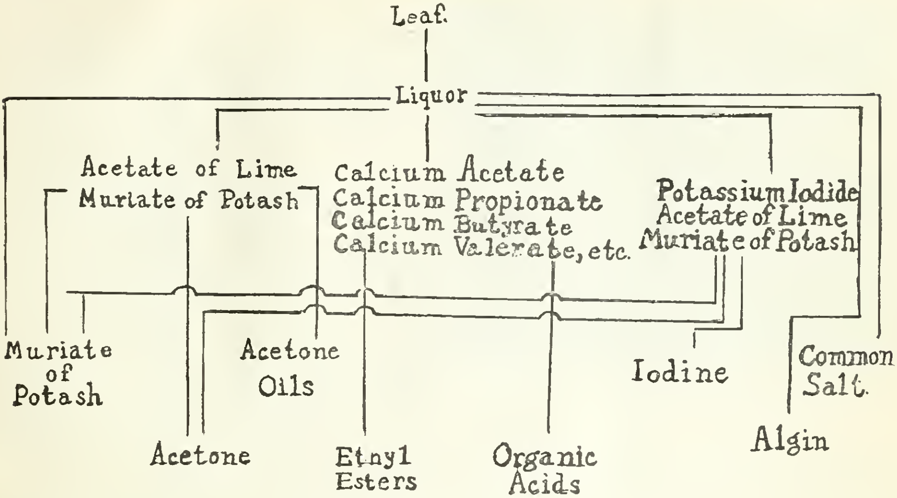
Acetone, Potash and Iodine from Kelp

The greatest practical advance in the economical production of potash from kelp was marked in the year 1915 when the Hercules Powder Company started the construction of large gasoline propelled marine kelp harvesters and a factory located near San Diego, Cal. This equipment was designed primarily for the production of acetone, potash and iodine from kelp. Kelp as a source of acetone was something entirely new to chemical industry, and chemists all over the world have watched the growth and development of the undertaking with great interest. The plant since its inception has rapidly increased the number and range of its products, and placed upon the market some new materials which are full of industrial promise.

Reduced to its simplest terms, the basic principle of this process of kelp reduction lies in the destruction of the cellular tissue of the kelp leaf by fermentation, bringing the potash into solution, and producing acetic acid as the product of the fermentation of the kelp leaf. The acetic acid is neutralized with limestone, giving calcium acetate, potash, and iodides in the solution.

Other Fermentation Products

The products chart on next page gives a general idea of the operations at this plant and serve as an introduction to the more detailed descriptions and process illustrated herewith. With this before us I think we can follow quite clearly the principal steps involved and the products produced in the fermentation of kelp. The kelp is harvested



and brought to the plant, pumped from the tank barges into the fermentation vats where it is allowed to ferment until the kelp leaf goes into solution and a liquor is obtained which on evaporation and concentration yields, at various stages, three intermediate salts.

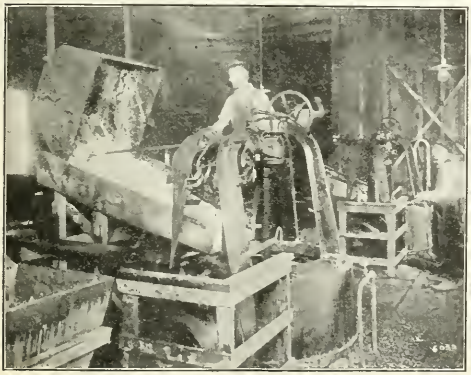
The first intermediate salt consisting of a mixture of acetate of lime and muriate of potash, is heated in regular acetone retorts, which produce acetone from the acetate, leaving as residue muriate of potash and calcium carbonate, from which the high grade 95% muriate is separated by leaching and subsequent crystallization. The fractionation of the crude acetone yields a certain amount of light and heavy acetone oils, in addition to the C. P. acetone.

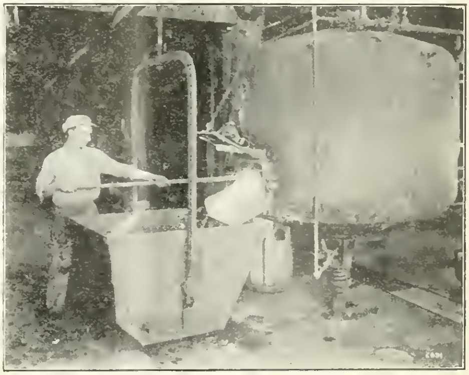
Intermediate salt No. 2, consisting of the calcium salts of the higher fatty acids, is mixed with alcohol and sulphuric acid and the corresponding ethyl esters produced by the well known methods. These esters are easily separated by fractionation. Ethyl acetate, ethyl propionate and ethyl butyrate in commercial quantities are now on the market from this source and are finding very extensive application as solvents in the soluble cotton industry, in the manufacture of artificial leather, etc.

Intermediate salt No. 3, consisting principally of potassium iodide, is treated with chlorine and the precipitated iodine dried and resublimed.

Algin a Possible Substitute for Gums

The last of the final products shown in the diagram is algin. This substance is at the present time being produced from the residual unfermented leaves which are screened from the fermentation


Dumping salts into centrifugal wringers.


Withdrawing salts from salting chamber

Upper floor crystallizing building from west end showing hot kettles on right, cold kettles on left.

vats. These leaves are treated with sodium carbonate which extracts the algin in the form of a soluble sodium salt which is afterwards precipitated and purified. So far, but little progress has been made in the commercial development of the use of this algin as an article of commerce. The perfection of extraction manufacturing methods, however, and the increasing cost of gelatin and vegetable gums, leads to the conclusion that this material may find a very extensive use in the future.

In addition to the foregoing valuable products promising experiments are now in hand whereby ammonia, valeric and caproic acids are being recovered as by-products in the fermentation of kelp. Nitrogen combined as ammonia exists to the extent of about 0.2% in kelp, and is left in the liquor after fermentation of the leaf. Valeric acid in the iso form is much needed at the present time in the treatment of nervous disorders, the supply of the valerian root from which the medicinal valerates were formerly made having been almost entirely cut off.

As a Source of Fine Chemicals

The high grade of purity of the potash produced in the fermentation of kelp is worthy of attention. The current factory product analyses about 94% KCl, with only about 0.3% sulphates, the difference being principally sodium chloride. This exceptional purity should recommend it especially to purely chemical users in the manufacture of potassium chlorate, nitrate, etc. The comparatively small output of the kelp ash factories is consumed almost entirely in the fertilizer trade. Kelp ash generally analyses about 15% K_2O, with about 2% ammonia.

Sufficient has been said I think to indicate that the kelp industry from being conceived solely as a source of fertilizer potash will eventually develop along the lines of fine chemicals with high grade muriate somewhat in the position of a by-product. It is doubtful whether the total potash production of all the kelp harvesting concerns, at the present time, amounts to more than about 35 tons a day on the basis of 80% muriate of potash. Of this, more than a half is of a high grade of purity, about 95%, KCl, and is produced not by the original method involving the incineration of the kelp, but by the fermentation process already referred to.

It may be a little early yet to speak definitely of the future of the kelp industry and its future bearing on potash. Certain it is that with kelp reduction factories extending all along the Pacific Coast that our domestic demands for potash cannot be met thereby. Certain it is, too, that kelp solely as a source of potash will never compete with unrestricted supplies from Europe or even with that recovered in modern cement or blast furnace practice. The utilization of kelp in such a way, however, as to realize on all the other possible values of kelp, some of which we have touched upon within the brief limits of this paper, may help to render the users of high grade potash for chemical purposes outside of the fertilizer trade indpendent of foreign supplies.

MORE BRITISH SUBSTITUTE FORMULAS

British pharmaceutical journals have recently published the following new formulas which have been devised to take the place of the Pharmacopoeial articles in which edible fats and oils were employed, the Ministry of Food prohibiting the use of such edible substances for purposes other than for human food. The Pharmaceutical Society in publishing the formulas states that it is necessary in selling the substituted articles for the seller to give the purchaser notice of the true nature of the articles supplied. The formulas are as follows

Adeps Factitius—Lard Substitute

Wool fat	5 parts
Hard paraffin	10 parts
Soft paraffin, white	85 parts

Melt together; stir, until cold.

Lard substitute is suitable for use in the place of prepared lard in making the following official preparations (British); Benzoated lard, aconitine ointment, atropine ointment, cocaine ointment; iodoform ointment and compound lanolin ointment. Lard substitute is also to be employed in place of the compound ointment bases as given in the British Pharmacopoeia.

Linimentum Hydrargyri—Liniment of Mercury

Mercury	9.0 parts
Soft paraffin, yellow	19.0 parts
Wool fat	1.5 parts
Oleic acid	3.5 parts
Solution of ammonia	23.0 parts
Liniment of camphor	44.0 parts

Mix the wool fat and soft paraffin, and triturate with the mercury until metallic globules cease to be visible. Mix the oleic acid with the liniment of camphor; add the solution of ammonia and shake well; incorporate with the mercurial emulsion.

Unguentum Picis Liquidum—Tar Ointment

Tar	70 parts
Soft paraffin, yellow	5 parts
Yellow beeswax	25 parts

Melt together; stir until cold.

"Overseas" With Our Boys

Where Portable Kitchens, Rolling Canteens and Mobile Hospitals Bring Comforts to Trench or Field

The cessation of the war will not diminish but rather increase the activities of the Red Cross, whose aid will be of vital moment in the great work of rehabilitation and reconstruction so urgently necessary in all foreign countries. The character of the activities of the Red Cross are well told in the following story prepared at Red Cross headquarters at Washington. An urgent appeal is made for funds to carry on this work. If you telephone to your local Red Cross Christmas Roll Call Committee, they will provide you with the necessary subscription blanks for the number of employees you have. Make your establishment a one hundred per cent pharmacy by getting a membership and fee from every one. Subscriptions and proceeds should be turned over at once to your local Red Cross chapter. Act now!

THERE are upward of five thousand American Red Cross workers in France, Belgium, England and Italy today. The variety of service given by these workers to our own soldiers and sailors, to the armies of the Allies, and to the civilian population would require volumes to describe.

The work in England is chiefly in the camps and hospitals and such emergency work as caring for the survivors of torpedoed ships. Approximately $9,000,000 will have been spent in the United Kingdom by the end of 1918.

The Red Cross in England

Practically all the American wounded from our divisions brigaded with the British in Flanders are taken to England for treatment. This makes the hospital work in England of the highest importance to America, and the Red Cross is doing everything possible to assist in making these hospitals, as well as the hospitals operated exclusively by the Red Cross, the best in the world. One of the services performed by the Red Cross is locating wounded American soldiers for their relatives and families, and sending news about them back home. More than five thousand volunteer workers, including American and English women, are engaged in this search.

Red Cross Activities in France

In France, Red Cross activities by the end of this year will have cost seventy-one million dollars. A large proportion of this sum has been used in the civilian relief work, which has won such high praise from the French armies and civilian leaders. Refugees have been fed, clothed and sheltered, children have been saved for the future, and the families of French soldiers have been sustained and encouraged, thereby improving the morale of the fighting forces.

General Petain in a recent letter to Colonel Harvey D. Gibson, general manager of the Red Cross in France, says that the work of the American Red Cross was one of the prime factors in keeping the French army in fighting trim, and he intimates that many French soldiers will be kept under arms for some time yet, so the need of Red Cross service will continue for months after peace is arranged.

The canteen service is keenly appreciated by all the soldiers. American women and girls serve hot drinks, sandwiches and tobacco at hundreds of camps, railroad junction points, hospitals, and in the principal cities where soldiers go on leave. It is at the railroad junction points that the American Red Cross makes the most profound impression upon the soldiers, for here the men change trains, and often must wait for hours before continuing their journey, and the canteens furnish a place to bathe, to sleep, read, eat, play games, or chat with the women workers.

Field canteens, operated by men Red Cross workers, are close behind the firing line and give the same service that may be found far in the rear. Millions of men are fed by these rolling canteens, and the cost of this one item runs into the hundreds of thousands of dollars.

The hospital service furnished by the Red Cross in France is chiefly at the base hospitals and in the cities. The field service, near the front, is done by the army nurses, and it is always well to remember that the Red Cross wherever it operates is always supplemental to the Army Medical Corps. For the last half of 1918 the Red Cross appropriation for French hospital service is seven million dollars.

The Red Cross maintains one hospital which was used exclusively for soldiers gassed in battle. Patients of this character require particular attention and have made remarkable progress under the treatment worked out by American surgeons. Because several kinds of poison gases are used by the enemy, the cases must be treated individually.

An interesting phase of hospital service in modern warfare is the mobile hospital, which is taken from one battlefield to another. Auto trucks carry complete surgical equipment to any part of the front and there are portable kitchens, disinfecting plants and dental ambulances. The dental ambulances have all the latest instruments that may be found in an American dental office.

More than fourteen thousand graduate nurses have been enrolled by the Red Cross in the United States and turned over to the Army and Navy Medical Corps for service in this country and abroad.

Christmas Packages to Soldiers and Sailors

In co-operation with the War Department, the Red Cross is assisting the families, relatives and friends of our soldiers and sailors to send each man a Christmas package in a specially designed con-

The Red Cross canteen service is keenly appreciated by soldiers

tainer. Of course, both the government and the Red Cross would like to have every man receive as much as anybody wanted to send him, but the shortage of space on the ships makes it essential to limit the size and number of packages at Christmas.

A new phase of Red Cross service that is growing rapidly is called hospital hut service, for which capable and attractive American girls are being recruited. It will be the duty of these girls to entertain convalescent soldiers. They will read to the men, write letters for them, plan entertainments, and fight the foe of homesickness, which must be vanquished if a speedy recovery is desired. Music plays an especially important part in convalescence, and the Red Cross has provided for this abundantly.

Co-operation With the Army Medical Corps

The extent of the co-operation of the Red Cross with the Army Medical Corps may be indicated by the statement that two hundred and thirty-one million surgical dressings have been shipped overseas, and the monthly shipment of sterilized gauze has been one million yards, while ten thousand pounds of ether have been sent monthly. The Red Cross also shipped ten million, six hundred and thirty-seven thousand two hundred and one hospital garments and eight million, two hundred and three thousand one hundred and twenty packages of hospital supplies.

Public interest in the rehabilitation of men disabled in battle has reached a high point. The Red Cross is co-operating with the government in research work, maintaining in New York City an institute for disabled men, where experimental work is done. It is the intention of the government to teach every disabled soldier a trade whereby he can support himself adequately. Men who have lost their legs are being taught stenography, motion picture operating, drafting, printing and many other trades, and those who have lost an arm are being supplied with new inventions which enable them to engage in a great variety of work. Farming is one of the favorite occupations of men disabled in the war. The government will not discharge from the army or navy any crippled man until he has learned to be self-supporting, and it is a notable fact that many of these men are earning more since they were crippled than they earned before the war.

It is to maintain the foregoing and many other forms of service to our fighting men and to their families through home service that the American Red Cross will conduct a Christmas roll call the week of December 16 to 23. What finer message could be cabled to our boys on Christmas Eve than that virtually the entire American people have enrolled in the Red Cross? Such a message also would mean a wonderful inspiration to the civilian populations of Europe because it would show that the American people are no less responsive to the needs of their fellow men in peace than in war. All anybody needs to answer to the Red Cross Christmas roll call is a heart and a dollar.

Sale of Remedies for Venereal Disease*

Responsibility of Druggists to the Public Health

> *The end of actual fighting in the world war does not lessen the necessity for the campaign against venereal diseases. Rather, it becomes a greater war emergency measure than ever. Cessation of hostilities centers attention on the return of the victorious American forces. On entering the service the men became subject to Army and Navy discipline, which, in the control of Venereal Diseases within the ranks, is rigid. Prior to demobilization, the tense fighting morale of the forces is bound to relax. The men will be buoyant in spirit and eager to celebrate. When mustered out they will return to conditions in civilian life which have been responsible for Venereal Disease. Many of them will contract it as a result. Unless all cases of Venereal Disease have proper treatment during the period of reconstruction, the scourge will reach alarming proportions. The time from now on is the most critical of all.*
>
> Rupert Blue *Surgeon General.*
> *U. S. Public Health Service.*

THE responsibility of the retail druggist does not end when he sells a remedy ordinarily used for the self-treatment of venereal disease. The drug store is more than an automatic vending machine, merely placing such remedies on the counter and accepting money in return. Rather, the drug business bears a definite, important relation to the health of the community.

Both physicians and druggists are particularly important factors in preventing the spread of venereal diseases, because persons who have these infections go to one or the other for advice or medicine; and in same cases, perhaps, both.

When the druggist is consulted, he recommends and probably sells some simple or patent remedy, or else directs the customer to a competent physician or venereal clinic In dealing with venereal cases, the responsibility of the druggist to the customer and the community is governed by the principle that no remedy, patent or otherwise, should be prescribed, compounded, or sold, without a physician's personal prescription, for the self-treatment of diseases known to be dangerous to the individual and communicable to others.

As applied to venereal disease the principle is clear. Syphilis, gonorrhea or "clap," chancroid, etc., are so serious that they should never be self-treated for reasons hereinafter set forth. The druggist who knows the dangers of venereal disease and yet continues to recommend or sell remedies for its self-treatment fixes his own responsibility. He becomes a contributing cause to whatever disastrous results may follow improper treatment.

Should the Druggist Inquire?

Many druggists have looked with favor on the self-treatment of venereal diseases, or have acquiesced in it, either through mistaken ideas of its character or because of a failure to recognize their responsibility to the health of the community. Some druggists have denied their right to inquire of a customer the use to be made of any drug or preparation suitable for purposes other than the treatment of venereal cases. Here again, it is a question of the responsibility of the druggist to the individual and the community. If the customer does not have a physician's prescription and the drug or preparation is one commonly used in venereal cases, the druggist should make inquiry. The person who knows the serious character of venereal diseases and the danger of communicating them will not resent the druggist's insistence on knowing whether the remedy is to be used for self-treatment. Such customer will recognize the necessity of protecting the individual and the community.

The person who does resent the inquiry usually will be found to be ignorant of the dangers of venereal infection. This gives the druggist an opportunity to do a fine piece of constructive work by pointing out to the customer the seriousness of venereal diseases, and why the utmost precautions are necessary to prevent their spread, especially in war time.

Dangers of Improper Treatment

Druggists should understand and make clear to the public that venereal disease is dangerous and that to act on the idea that it is a trifling matter is more dangerous still. Syphilis kills many thousands each year and sends scores of victims to insane asylums. Persons who say that gonorrhea is no worse than an ordinary cold do not know that a large percentage of blindness and of operations on the sex organs of women is due to gonorrheal infection. Certain forms of kidney trouble, stricture with all its attendant pain and damage, gonorrheal rheumatism and much sterility follow in its wake.

These facts need be unpleasant only to the person who is unwilling to take the necessary steps to be cured. The reason for such serious aftereffects of venereal disease is that the individuals themselves thought they could overcome the infection. Self-treatment through the use of simple remedies or patent preparations purchased at a drug store appealed to them as secret, easier and cheaper, and probably just as effective. They were wrong. The use of such remedies may perhaps cause the acute symptoms to disappear, but to cover up a disease is not to cure it. Syphilis is treacherous. Unless properly treated until pronounced cured by a competent physician, it may lurk in the body for years, and then break out again, causing all manner of physical disability.

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*Bulletin No. 2, United States Public Health Service.

Gonorrhea has the same lurking tendency. Without a complete cure, it may appear years later, or even without warning, infect some innocent person, perhaps subjecting him, or more probably her, to lifelong invalidism. Children may be blinded at birth when born of a mother who has gonorrhea, with which in many cases she was infected by her husband, who probably had thought himself cured. If the infection is syphilis, there is the danger that the child will be born so weakened or deformed physically and mentally as to prove a handicap throughout life.

Thus the seriousness of the disease is apparent and the personal responsibility of infected persons to protect others is clear. Druggists, physicians, and all health officials must educate venereal patients relative to proper necessary precautions. To delay treatment only fastens the hold of the infection on the system and allows it to spread and become firmly established. To start off with a temporary or make-shift self-treatment has the same result. Either may be done in an effort to conceal the trouble, or to save money, but the means defeat the end. Venereal disease improperly treated will persist and eventually a much worse condition develops, requiring greater care and the expenditure of more money in the long run than otherwise would have been the case.

Proper Medical Treatment

There is only one way to secure proper treatment for a venereal disease and that is to go to a reputable physician, or, if desirable from the standpoint of least possible expense, to a government venereal disease clinic. Scientific diagnosis and treatment for the individual patient by trained physicians are absolutely essential. Such treatment must be changed as conditions require. Only rigid medical tests, properly supervised, will determine whether infection is still present in the system—perhaps unrecognized by the patient, or not causing any bother, but, nevertheless, *there.* Infected persons should not let obstacles stand in the way of procuring the best available medical treatment. What they must have, not only for their own welfare but for that of society, is a complete cure and not merely relief from certain annoying symptoms.

Avoid the Quack Doctor

Infected persons who prefer to go to a physician should make sufficient inquiry to enable them to select some one of standing in the community, both for ability and character. The quack doctor and medical institute advertising, and in many cases guaranteeing, to cure venereal diseases quickly, should be avoided absolutely. Such doctors and institutes are far more interested in the pocket book of the patient than in his or her health, and in many cases the treatment, instead of being shortened, lasts as long as the patient has money which he can be induced to pay out. Sometimes symptoms of simple infections of little consequence are diagnosed by quacks as venereal disease or serious sexual trouble.

Importance of Following Directions

Carriers of venereal disease should follow the directions of the physician implicitly. Treatment must be persisted in even after the symptoms of disease have disappeared and for so long as the clinic or physician advises. Otherwise, whatever has been done up to the time of stopping treatment short of a complete cure will not remove the haunting doubt in after years that perhaps the disease still persists in the system.

Persons who already have started to treat themselves for venereal disease by the use of simple or patent remedies should stop the practice immediately. Even though they may be improving, such form of treatment should not be continued, for, as pointed out, it leads them to believe that a complete cure by such means is possible.

Building Public Confidence

In directing men and women suffering from venereal diseases along the lines above suggested, druggists of the country will build for themselves a public confidence of great value and at the same time they will know personally that their best efforts are being given toward the elimination of the venereal scourge in their respective communities, both for the best interests of the civilian population and for the greater fighting efficiency of the armed forces of the nation.

SELECTED FORMULAS

(Proposed for the A.Ph.A. Receipt Book)

Turner's Expectorant

Ammonium chloride	8 grams
Extract of glycyrrhiza	12 grams
Camphorated tincture of opium	16 mils
Syrup of squill	30 mils
Water, enough to make	120 mils

Liquor Antisepticus Deodorans

(Telephone Solution)

Thymol	2 grams
Oil of pine needles	2 mils
Oil of peppermint	2 mils
Alcohol	60 mils
Water, sufficient to make	1000 mils

Mix. The solution is used for scrubbing the mouthpieces of telephones.

Buckeye Herb Tea

Senna, broken pieces	40 grams
Elder flowers	25 grams
Fennel, bruised	12.5 grams
Anise seed, bruised	12.5 grams
Potassium bitartrate	10 grams

Moisten the senna leaves with a small quantity of water. Sprinkle the potassium bitartrate as uniformly as possible over the senna. When dry, mix in the other ingredients. One and a half ounces for 10 cents.

Fuller's Inhalant

Menthol	2.5 grams
Guaiacol	4.0 mils
Camphorated tincture of opium	125.0 mils
Compound tincture of benzoin, enough to make	250.0 mils

A modified form of this inhalant is made by adding 4 mils of terebene to enough of the above mixture to make 250 mils.

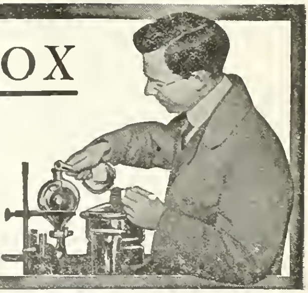
Buy War Savings Stamps.

THE QUESTION BOX

The "How to Do It" Department

CONDUCTED BY PHARMACEUTICAL EXPERTS

For the benefit of ERA Subscribers



Manufacture of Valerates

(X. Y. Z.)—It is stated on fairly good authority that the manufacture of valeric acid in this country is now practically in the hands of a New York firm which maintains laboratories in New York and Brooklyn, although up until a few years ago at least two concerns were making the various valerates. Before the war most of these products were imported from Germany. While valeric acid exists in valerian, anthemis, humulus, viburnum, etc., being formed by the oxidation of volatile oils or other natural constituents, it is usually prepared from amyl alcohol by reaction with a mixture of potassium dichromate and sulphuric acid as the first step in the manufacture of sodium valerate, from which the other valerates may be prepared. By adding sulphuric acid to a strong solution of sodium valerate in water, valeric acid is liberated as an oily layer which rises to the surface and is then separated by appropriate means. Ammonium valerate is the salt most commonly employed, perhaps, but there is also some demand for zinc and iron valerates and occasionally, for valerates of certain of the alkaloids, as also some of the valerian substitutes as bornyl isovalerate and related synthetic compounds.

While ammonium, iron and zinc valerates may be quite easily made, most pharmacists prefer to buy the salts already prepared rather than attempt to make them on account of the pungent and extremely disagreeable odor of valeric acid, which is very penetrating and difficult to eliminate from the pharmacy or laboratory in which these salts have been made. However, zinc valerate may be made by a double decomposition of sodium valerate and zinc sulphate as follows;

Sodium valerate	25 parts
Zinc sulphate	29 parts
Distilled water, sufficient.	

Dissolve the salts, separately, each in 200 parts of water; heat the solutions to boiling; mix while hot; let the mixture cool. Collect the crystals, wash hastily with cold water, and dry between filter paper. Another crop may be obtained by evaporating the mother liquor to 20 parts, cooling, and separating the crystals formed. The reaction is represented by the following equation;

$$2NaC_5H_9O_2+ZnSO_4=Zn(C_5H_9O_2)_2+Na_2SO_4$$

It should be noted that as the zinc valerate is lighter than the solution of sodium sulphate, the crystals rise to the surface as they are formed. An alternative process for making zinc valerate is to dissolve 3 parts of zinc oxide in a mixture of 5 parts of valeric acid, 200 parts of alcohol, and 200 parts of water; but the crystallization is tedious on account of the necessity of using but moderate heat in evaporating the solution. The crystals must be dried without the aid of heat.

Iron valerate may be made by dissolving 5 parts of sodium valerate in 60 parts of distilled water and filtering. To this solution is added gradually and with constant stirring, a solution made by mixing 6 parts of solution of ferric chloride, U.S.P., with 100 parts of distilled water, taking care to discontinue the addition of ferric chloride as soon as it no longer causes precipitation. Then collect the precipitate on a filter and wash it quickly with cold distilled water until the washings are tasteless. Dry the product on blotting paper frequently changed and without the aid of heat.

Ammonium valerate may be prepared by saturating valeric acid with dry ammonia gas, usually generated from a mixture of equal parts of ammonium chloride and lime. The heat produced in the reaction keeps the salt in a liquid condition, and on cooling the valerate crystallizes. Ammonium valerate as found in the market is usually the acid salt, so that in making a solution of it, as in the process for elixir of ammonium valerate N.F., the excess of acid should be neutralized by the addition of ammonia water. This salt was brought forward many years ago as a nerve sedative, but until after the beginning of the present European war, its use was somewhat limited. Recently, however, it is stated on good authority, interest in the therapeutic employment of all the valerates has been revived by the reported fact of their satisfactory use in the treatment of shell shock from which so many soldiers are suffering in the hospitals on the battle front or who have been returned for treatment in this country.

Cement for Cinematograph Films

(H. B. P.)—The following formulas have been recommended for mending cinematograph (moving picture) films:

((1)

Ether	2 ounces
Acetone	4 ounces

Take a strip of non-inflammable film about 8 inches long, cut it up into small pieces, which dissolve in the solution of ether and acetone. This is said to be a very good cement for the reason that it sets quickly.

(2)

Isinglass	50 parts
Gum ammoniac	4 parts
Gum mastic	2 parts
Alcohol, 95 per cent	10 parts
Water, a sufficiency.	

Soak the isinglass in cold water over night, or until it is thoroughly softened, then drain, and press gently between absorbent cloths. Place the softened material in a flask, and heat on a waterbath until it becomes fluid. Dissolve the gums in the alcohol, and add the solution to the isinglass liquid after removing it from the source of heat and cooling to about 160° F. Stir well, or mix by agitation. Before applying the cement, which must be used warm, clean the surface of the films with chloroform or other fat solvent. If this does not succeed, a borax-shellac solution may be used. This cement is recommended for non-inflammable films.

(3)

Sandarac	2 ounces
Venice turpentine	½ ounce
Oil of turpentine	1 ounce
Alcohol	20 ounces

Mix, dissolve and filter.

Smelling Salts

(W. G. M.)—The Era Formulary states that the base of smelling salts is ammonium carbonate, from which the ammonia slowly escapes. The carbonate is generally mixed with some aromatic powder or liquid, in which the lavender perfume is mostly predominating. A better base than ammonium carbonate is a mixture of potassium carbonate and ammonium chloride, in which the volatile ammonia is slowly generated. Care should be taken to have a container with a good stopper, for the secret of inexhaustible salts lies more in the stopper than in the salt.

Here are two formulas:

(1)

Ammonium carbonate	2 pounds
Stronger water of ammonia	1 pound
Oil of bergamot	1 dram
Oil of lavender	2 drams
Oil of myristica	15 minims
Oil of cloves	15 minims
Oil of cinnamon	1 dram

Break the ammonium carbonate into small pieces in a large Wedgwood mortar, then pour over the salt the stronger water of ammonia with which the perfumes have been previously mixed. Cover the mortar and allow the mixture to stand for a few days to effect the conversion of ammonium carbonate into monocarbonate. Reduce the whole to a coarse powder and keep the whole closely stoppered.

(2)

Ammonium carbonate, crushed to a coarse powder, 6 ounces; ammonium chloride, granulated, 1 ounce; caustic potash, crushed fine, 2 ounces; orris root, in coarse powder, 4 ounces; lemon peel, rosemary leaves, lavender leaves, all in coarse powder, of each 1 ounce; cloves, cinnamon, calamus, of each ½ ounce; oil of bergamot, ½ ounce; oil of lemon, ¼ ounce; extract of musk or civet, ½ ounce; stronger ammonia water, ½ ounce. Mix them well together. Fenner recommends this formula "if something fine is desired without regard to cost."

Cleaning and Sterilizing Surgical Instruments

(Student)—A method for removing rust from surgical instruments appears elsewhere in this department. To cleanse instruments the following method is employed in many hospitals: Wash and scrub in cold water to remove the blood stains, then in hot soapy water, using sapolio to remove stains if necessary; wash in clean water and boil for twenty minutes; remove from the boiling water and place in alcohol, then dry thoroughly; especial care is needed at the joints and serrated ends. Before being put away the joints of delicate instruments may be slightly smeared with paraffin oil to prevent them from getting stiff. Instruments should be dried on a clean fine cloth, then polished with a chamois leather. If further polishing is required and allowed, whitening made moist with alcohol may be used; care is required in order to remove all the powder; a brush should be used for this purpose.

To sterilize instruments, place in boiling water containing washing soda, 1 per cent solution. Boil for 20 minutes. The water must entirely cover the instruments or they will rust. Shutting instruments, such as forceps, should be opened before being sterilized. Sharp cutting instruments are blunted by prolonged boiling, and therefore they should be sterilized before putting in the other instruments. Boil for five minutes and immerse in alcohol until required; or they may be sterilized without boiling by placing in pure carbolic acid for one minute, removing the instruments by the aid of forceps; then wash the instruments in hot sterilized water and place in alcohol. Delicate cutting instruments, such as cataract knives, etc., may be sterilized by immersion in absolute alcohol for a few minutes, after which they are placed in spirit until required for use. When sterile, instruments are placed in either sterilized water, alcohol, or an antiseptic solution according to the wishes of the surgeon, or they may be used dry, arranged on a sterilized cloth. A solution which has been recommended as suitable for the rapid disinfection of instruments is the following:

Olive oil	3 ounces
Solution of potassa	3½ ounces
Alcohol	16 ounces
Distilled water	8 ounces

The instruments should be thoroughly washed or wrapped in cotton-wool saturated with the solution, which may also be used for washing the hands of the operator and the skin of the patient. It is also probable that the operating surgeon may have some ideas of his own as to how his instruments shall be sterilized.

Books on Essential and Vegetable Oils

(A. M. I.)—The literature of essential and vegetable oils is somewhat scattered, and the best sources for information regarding the uses of these oils are the chemical, pharmaceutical and technical trade journals. The uses of these substances in medicine and pharmacy are pretty well outlined in the dispensatories, but other works will have to be consulted concerning the oils used in the manufacture of perfumery, flavoring extracts, painting, etc. To a certain extent, therefore, the seeker for information of this character will have to be his own compiler, although he will find considerable data about which you inquire in Sawer's "Odorographia," 2 volumes, published in London more than a dozen years ago. The following books may also be profitably consulted:

Gildemeister & Hoffman, The Volatile Oils, Vol. I	$5.00
Parry, Chemistry of Essential Oils and Artificial Perfumes	5.00
Mitchell, Animal, Vegetable, Essential and Mineral Oils	.85
Mitchell, Edible Fats and Oils	3.00
Lewkowitsch, Chemical Technology and Analysis of Oils, Fats and Waxes, 3 volumes	25.00
Andes, Vegetable Fats and Oils	5.00
Fryer, Technical Handbook of Oils, Fats and Waxes, Vol. I	3.00
Wright, Animal and Vegetable Fixed Oils, Fats, Butters and Waxes; their preparation, properties, and the manufacture therefrom of candles, soaps, and other products	8.00

Linimentum Viennese

This is a veterinary preparation said to consist of coal tar, washed sulphur, alcohol and soft soap.

The Progress of Pharmacy

Detecting Arsenic in Sodium Sulphate—

Carles suggests the following method for use of pharmacists in detecting minute quantities of arsenic in official sodium sulphate: Into an ordinary half liter wine bottle introduce 100 Gm. distilled water, 5 Gm. of sulphuric acid and 5 Gm. pure zinc. Close the mouth of the bottle by superimposing a cap of filter paper (previously moistened with a 1 per cent mercuric chloride solution and dried before use) 4 to 5 cm. in diameter, the latter being held securely in place by a porcelain capsule, a drinking glass, a pomade pot or a piece of window glass. If, after the lapse of 40-50 minutes, the paper screen remains colorless, the reagents are pure. Thereupon, introduce about 25 Gm. of the sample to be tested into the bottle, dissolve by agitation and operate as before. The presence of arsenic will be shown by the formation of a canary-yellow to the deepest brown stain on the exposed paper, the various shades of color corresponding to greater or less quantities of arsenic. This reaction permits the detection of as little as 0.1 milligram of arsenic in 100 Gm. of sodium sulphate (*Repcrt pharm.* through *Chem. Abs.*)

Sengite, a New Explosive—

Sengite is the name given to a new explosive which is now being manufactured and used by the mining industry in South Africa. It is described as having a guncotton base, the process consisting in the manufacture of tonite in which nitrate of soda is substituted for nitrate of barium which is usually used in tonite. The process of manufacture is to incorporate the various ingredients thoroughly, clean, sieve, and blend, and finally hydraulically, press them into the shape of the cartridge under a pressure of from 5 to 10 tons to the square inch. In pressing, a recess is left in the cartridge to take a denotator. It is said that this explosive is so insensitive to shock as to be quite safe if hammered with a steel tool. The name "sengite" originated with the manufacturers. The first four letters were derived by using the initial letters in the words, "substitute explosive, no glycerine," while the last three letters are taken from the word "dynamite."

Determining the Solidifying Point of Naphthalene—

The ascertainment of whether naphthalene falls within the provisions of the Tariff act of Sept. 8, 1916, requires an accurate scientific test as to the solidifying point, and if it has a solidifying point at 79° C. or more, it is dutiable as provided therein. In a recent case where the importation of a consignment of naphthalene hung upon the establishment of the solidifying point, three experts presented their findings to the Board of General Appraisers, which found on the evidence presented that the instruments used and the methods pursued by the Government analyst conform to the scientific process necessary to accurately ascertain the solidifying point. Briefly, the operation is described as follows: The sample is thoroughly mixed, and introduced into the inner tube of a Roth melting point apparatus to a sufficient depth so that as soon as it is melted it will occupy a depth not less than 3 to 4 inches in the tube, care being taken not to permit the melting temperature to exceed a few degrees above the actual melting point of the naphthalene. A standardized thermometer of such length as to permit all of that portion of it used to be immersed below the upper level of the water in the water jacket is then immersed so that the bulb will stand centrally in the melted naphthalene. There is also placed in the melted naphthalene a thin metal wire bent at the lower end into a ring form to permit of stirring the molten mass in an up-and-down motion, which stirring is continued throughout the operation. The thermometer is observed at short intervals of time, one-half minute usually, and readings are taken until the observed temperature reaches the lowest point, rises slightly and becomes constant for a period of several minutes, frequently as much as ten minutes. The observed temperature is that which is found at the point where this temperature is constant. This temperature is further corrected by any error that may be in the thermometer and for errors in the exposed portions of the stem. The final figure is the solidifying point of the naphthalene.

Ajowan Seed and Thymol—

Ajowan seed is derived from an annual herb, *Carum copticum,* closely related to the ordinary caraway. It is grown mostly in India, and the volatile oil of the seeds is used as the principal source of thymol. Samples of seeds from experimental crops grown in the Seychelles and Montserrat have been examined. The Seychelles seed had a poor appearance, a large proportion being small and immature. The seed yielded approximately 9 per cent. of oil containing about 38 per cent. of thymol; Indian ajowan seed yields only 3/4 per cent. of oil containing 40-55 per cent. of thymol. Consequently, although the Indian oil is richer, the yield of thymol from the Seychelles seed is higher than from Indian seed. The Montserrat seed yielded 3.1 per cent of oil containing 54 per cent. of thymol; the oil had a specific gravity of 0.925 at 15°/15° C. The seed was harvested six months after sowing and showed a yield of 1128 pounds per acre. The result is considered to be encouraging, but the distillation of the oil should be carried out in the country of origin.—(*Bull. Imp. Inst.* Through *Journ. Soc. Chem. Ind.*)

Formaldehyde for Treating Seed Grains—

Some interesting facts concerning the use of formaldehyde for treating cereal smuts are told in a recent bulletin issued by the Michigan Agricultural College. As sold commercially, formaldehyde contains from 36 to 40 per cent of formaldehyde gas, and usually carries from 8 to 15 per cent of wood alcohol to prevent the formation of paraformaldehyde, the whitish, jelly-like or limy precipitate which is apt to be found in old solutions, especially those which have been kept cold. Formaldehyde as a gas has a strong affinity for water. It cannot be driven out of the solution by boiling. Diluted solutions become slightly stronger on standing exposed to evaporation. Formaldehyde when sprayed or sprinkled upon grain airs very slowly—not at all if the weather is cold and wet. Airing should be done under warm conditions, preferably in the open where quick drying of wet grain can take place. Planting, if done immediately after the requisite period of covering, can take the place of airing. The damp soil is greedy for formaldehyde and will take it up, removing all chance of danger.

As formaldehyde is diluted with water its toxicity to wheat increases so that at 1 part of formaldehyde to 10 parts of water, the solution is very injurious. At greater dilution, 1 part to 200 of water, the action is still more marked. From that point the toxicity gradually decreases. The effect of formaldehyde diluted 1 pint to 40 gallons (1 to 320) is slight, provided the action is not carried on too long. Formaldehyde shows a sort of cumulative action on grain, either when sprayed on the grain as a concentrated solution or when dried upon it as in the wet method. It seems likely that the formaldehyde is largely present as paraformaldehyde and as such persists on the grain, even after months of airing. "We have in the past looked upon formaldehyde as a gas which was hard to confine and which would air readily. We must rather look upon it as a compound which readily becomes stable and which airs slowly and then only under warm, dry conditions." The prediction is made that future experiments will lead to lessening of amounts to be used for treating grains as also to the shortening of time of covering rather than to the reverse.

Strength of Odorous Substances—

Backman summarises the following facts relative to the physiological conditions governing the sense of smell: In order that a substance may be odorous, it must be soluble both in water and lipoids, since the cell of the receptor organ for smell are covered with a watery fluid, while they themselves contain lipoid granules. Thus, the odors of the series of homologous alcohols first increase as the molecular weight rises, and then decrease again. Methyl and ethyl alcohols, for example, are comparatively odorless, owing to their minimal solubility in fats, while cetyl alcohol is also odorless because of its limited solubility in water. Butyl alcohol is soluble in both and has a powerful odor. The same considerations apply to the methylbenzenes and to the isomeric alcohols, as well as to the relative effects of the presence of carboxyl in the derivatives of the alcohols and in the benzene derivatives. The law applies only to homologous or isomeric series, since the chemical nature of substances in general plays a large part. Thus, acetone, although of slight solubility in fats, has a powerful odor. (*J. phys. path. gen.*, through *Chem. Abs.*)

Carbon Tetrachloride as a Delousing Agent—

Experiments undertaken by M. H. Foster, surgeon of the U. S. Public Health Service, to determine the most effective means of destroying body lice on clothing, indicate that under certain conditions carbon tetrachloride may be effectively employed. As an insecticide it has not attracted much attention, but according to Dr. Foster, it appears to be very toxic for flies, ants, potato bugs, and lice, the vapor of carbon tetrachloride being much more toxic in its effect on flies than either gasoline or chloroform. As an insecticide for the delousing of soldiers' clothing in places where complicated apparatus cannot be obtained, experiments tend to show that it can be effectively used for the purpose under most conditions.

In performing the experiment the complete clothing outfit of a United States Army private, on which had been placed a certain number of live lice, was packed in a 10-gallon tin container, and then subjected to the action of 25 Cc. of carbon tetrachloride, poured on the clothing through several layers of filter paper. The can was then covered by several thicknesses of toweling and a loose cover placed over this, the idea being to protect the can from the effects of drafts but not to seal it hermetically so as to permit some of the air to escape at the top when it was displaced at the bottom by the heavy vapor. At the end of two hours the can was opened and the lice-infected clothing examined, with the result that all of the lice were found to be dead. It was also ascertained that exposure under similar conditions to the same strength of carbon tetrachloride for an hour and a half was not sufficient to kill all the lice, about 25 per cent surviving. A possible drawback to its use arises from the danger of inhaling the fumes in a concentrated form, but Dr. Foster states that if experience shows that it is safe to use this substance in the manner described for the destruction of body lice on woolen fabrics, it will certainly prove to be a most efficient and convenient means, especially where recourse cannot be had to the more complicated methods usually employed on a large scale.

Mexican Sarsaparilla: Black Sarsa—

Farwell reporting to the A.Ph.A. on the quality of medicinal products states that supplies of Mexican sarsaparilla have been more or less curtailed with a consequent rise in price. Many substitutes have been brought forward, some of which are roots of unofficial species of Smilax. One substitute is the rhizome of some fern. Externally it is black, dorsiventral and when broken crosswise shows a structure similar to that of *Iteris Aquillina.* This is not permitted to enter the country under the name of sarsaparilla, but considerable quantities have been admitted under the name of "black sarsa."—(*Journ. A.Ph.A.*)

Division of Ingredients in Pills and Powders—

Groenberg records the results of certain experiments to determine the accurate division of ingredients in pills and powders. Trituration experiments with sugar and citric, tartaric and citric acids; with sugar and calcium carbonate, or sodium carbonate, sodium chloride, sodium phosphate, and sodium sulphate all gave analogous results when the amount of the added substances was determined chemically. The accuracy of the distribution depends on the amount of the powder and the time of trituration. When 10 powders are prepared the result is more accurate in a given time than with 20 or 30. Trituration for one minute gives very varying results; more even distribution results in rubbing for three minutes. Five minutes' trituration gives practically accurate mixing. The same results were obtained in the case of pills.—(*Schweiz. Apoth. Zeit.* through *Pharm. Journ.*)

Antiquity of Sugar—

Commenting on the statement of Professor Lassar-Cohn made in the latter's well-known "Lectures on Chemistry in Daily Life," that "cane sugar was first brought to the knowledge of Europeans by the Crusaders, and at first only as a syrup, the preparation of solid sugar dating only from the year 1400," Xrayser, in "Chemist and Druggist," says this conclusion is curiously at variance with well established fact. The Calendar of Cordova (referred to in "Pharmacographia") shows that as early as 961 the cultivation of the sugar cane was well understood by the Spanish Arabs, as it also was in Sicily and other parts of Southern Europe, in which this industry for a time at least flourished. Seeing that sugar manufacture had been carried on in Persia long before this, it is incredible that the Arabs of Europe knew it only as a syrup. The earliest recorded mention of sugar in English occurs in a document of 1299, in the form of "Zuger Rock," which indicates a solid, not a liquid substance. The phrase "Zuker Marrokes" (Morocco sugar) is of the same date, and points to an Arab origin. As for 1400 being the date of the first preparation of solid sugar, the term "sugar candy" (which means sugar in pieces, "candy" being from the Sanskrit root *khand*, to break) is considerably earlier than that. It may therefore be concluded that the sugar of the Arabian pharmacists in Spain and elsewhere was virtually that with which moderns are familiar.

DRUG TRADE ROLL of HONOR

To honor the men of Pharmacy serving in the war against Autocracy the ERA wants to publish a complete roster. Send full particulars to 3 Park Place, New York.

C. M. Kline

G. K. Ditmars

GEORGE K. DITMARS KILLED

One of the boys connected with the drug trade who made the supreme sacrifice for his country was George K. Ditmars, 23 years old, of Rahway, N. J. Mr. Ditmars, who was killed in action on September 16th was a valued employee of Merck & Co., New York City, holding the position of assistant foreman at the company's works in Rahway when called to the colors. He was a member of Company F, 61st Infantry, going to Camp Dix on December 12, 1917. He sailed over seas on April 5th, 1918, word being received on May 2nd of his safe arrival, and had been on the firing line for some time previous to his death. He was a general favorite with all his acquaintances and was active socially in athletic circles.

CLARENCE MAHLON KLINE IN SERVICE

Clarence Mahlon Kline, 1st vice president of the Smith, Kline & French Co. of Philadelphia, was given a furlough from his duties with that well-known wholesale drug firm on October 1st last to enter the Government services. He is now a student of the Field Artillery Central Officers' Training Camp—Camp Zachary Taylor, Louisville, Ky. Mr. Kline was born in Philadelphia in 1880. He graduated from Penn Charter School at the age of 16 and from the Sheffield Scientific School with honors in 1900. He returned the next year to take a post-graduate course in physiological chemistry, and upon returning to Philadelphia he entered the business house of Smith, Kline & French, of which his father, Mahlon N. Kline, was president. Following the death of his father in 1909 he was made vice president and was also elected trustee of the Philadelphia College of Pharmacy about the same time.

Mr. Kline is not a novice in military affairs, having served nine years in the first troop of the Philadelphia City Cavalry.

He is a very active member of the business house with which he is associated and has been connected with several of the later enterprises which the firm has undertaken. In 1916 he went to California to make arrangements for the building of a mill for the manufacture of sugar of milk to be operated in connection with the Philadelphia house. As soon as he had finished the plant in California and had put it in good working order, he enlisted in the United States service.

LIEUT. EVANS WRITES FROM THE FRONT

According to a letter from Lieutenant Harold F. Evans, written on September 14th, to his father and mother, Mr. and Mrs. George B. Evans, the former the widely known Philadelphia druggist, the present American offensive was expected to be one of the greatest drives of the war.

Lieutenant Evans wrote that the offensive would go down in history and that he was proud to have a part in it.

He was one of the first American fliers to receive a commission and he has been in France for many months. Most of the time he served as an instructor in the army aviation camp, but as the time for the drive came on he was given a chance to take part in it.

Lieutenant Evans describes his experiences in the following letter:

"Dear Mother: As you have seen by the papers, we have started an offensive which will go down as one of the foremost events in our history. So far it has been a complete success and I am proud that I had an opportunity to take part in it.

"We were ordered to shoot up the roads and hinder the progress of the retreating Boche. It was a great

Lieut. H. F. Evans

success, although we were very much handicapped by stormy weather. As my compass did not work and there was no sun to give us our direction I soon became lost and, believe me, it was a nasty feeling. I was flying too low for artillery fire to hit me and machine guns are very ineffective, as we have terrific speed and maneuvering ability. They finally ceased shooting at me as I flew in the clouds in the direction of what I thought was right and I landed almost out of gas at a French anti-aircraft battery.

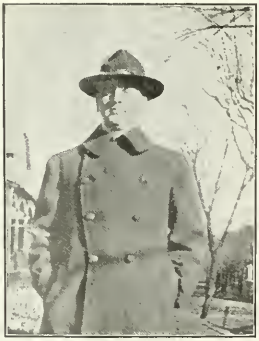
"I stayed there all night, and in the morning my mechanics came, but without any gas, so I decided to try to make a flying field near by, which I did. I filled up and started for home, but my motor quit cold, and I turned and landed, and stayed there for the night until my mechanics came again. The next attempt was successful, so I came back again and ready for orders.

"As yet I have not run up against any Boche, but we brought down five yesterday. You can imagine it is very exciting. Do not worry as it will do no good. When we finish our fighting we return to a good meal and bed. "Harold."

Lieutenant Evans' brother, Ensign George B. Evans Jr., who was killed at Miami last June, was also an aviator, although he was in the naval branch. He was flying at a low altitude when his seaplane fell into the water, killing him almost instantly. His companion escaped with a few slight injuries.

Crosby L. Smith

The stalwart soldier shown below is Crosby L. Smith of Media, Pa. Before his induction into the army he was associated with the drug trade, having commenced his career in this field as an apprentice in the store of Strode Gefferis of Media. He graduated from the Medico Clio, Class of 1906. Later he was employed in the laboratories of the H. K. Mulford Co. in Philadelphia.



Lieut. A. Hall above.

Crosby L. Smith on right.

Another Druggist Soldier Killed

Word has been received that Lieutenant Asbury Hall, formerly a druggist of Adel, Georgia, was killed in action somewhere in France on Sept. 13th. Lieutenant Hall, who was 22 years old, was a member of Company H, 3rd Infantry. He was born in Adrian, Georgia, and studied pharmacy at Mercer University in Georgia, paying his own way through school. He had just made a nice start in business when his country called and he volunteered to go into the army. He went overseas in January of this year, and had been doing a man's duty at the front for several months before his death.

GEORGE BONNER, registered pharmacist with H. W. Taylor & Son, Luzerne, N. Y., pharmacist, Base Hospital, Allentown, Pa.

PAUL J. GUEDET, Ph. C., Univ. Calif., '08, professor of pharmacy, College of Physicians and Surgeons, San Francisco; private, spruce squadron, State of Washington.

THOMAS P. CAMPBELL, 122 So. 40th st., Philadelphia, formerly with George B. Evans; sergeant, Base Hospital No. 34, Nantes, France.

CROSBY L. SMITH, Ph.G., 2nd & Jackson sts., formerly with Druggist D. Strode Jeffries, Media, Pa.; 1st class private, Base Hospital No. 38, France.

HAYWOOD TAYLOR, drug clerk with Edgecombe Drug Co., Tarboro, N. C.; lieutenant, Infantry, instructor detailed to University of Pennsylvania.

CARL D. ROSENBAUM, registered druggist with Edgecombe Drug Co., Tarboro, N. C.; private, Dispensary, Base Hospital No. 45, American Expeditionary Forces.

L. VERNON HART, drug clerk with Edgecombe Drug Co., Tarboro, N. C.; private, Base Hospital No. 65, somewhere in France.

EUGENE F. RIMMER, registered druggist with Edgecombe Drug Co., Tarboro, N. C.; 1st sergeant, Medical Corps, Fort Caswell, Wilmington, N. C.

ROY STANLEY KELLEY, associated in business with Kelley's Pharmacy, North Troy, N .Y.; Pharmacist's mate, U. S. marines, Base Hospital, Quantico, Va.

HENRY CLAUDE GRINDLE, in charge of prescription department, E. P. Wilson's drug store, Seville, Ga.; 3rd pharmacy mate, U. S. Naval Hospital, Charleston, S. C.

WILLIAM NOVAK, 3409 N. Lavergne ave., Chicago, Ill., with Sargent's drug store, Chicago; private, casual detachment, Camp Talliaferro, San Diego, Cal.

THADDEUS MECLEWSKI, 2031 Armitage Ave., Chicago, Ill.; with Sargent's drug store, Chicago; private, now in France, camp not known.

JAS. E. MELVIN, 1431 Thome ave., with Sargent's drug store, Chicago; private, present address unknown.

CHARLES GREEN, 1220 Arthington st.; with Sargent's drug store, Chicago; private, Medical department, Camp Grant, Rockford, Ill.

VICTOR E. TONNESON, 323 N. Keeler ave., with Sargent's drug store, Chicago; U. S. Navy, Municipal Pier, Chicago, Ill.

ELMER J. JOHNSON, 5009 N. Hermitage ave., with Sargent's drug store, Chicago; sergeant, Base Hospital No. 14, APO 780, France.

WALTER S. McCORMACK, Ph.G., St. Louis, Mo.; sergeant, Medical Detachment, 210 Signal Corps, Camp Funston, Kansas.

C. H. McDONALD, Rocky Comfort, Mo.; Co. 523, Old Detention Camp, Great Lakes, Ill.

SHANKLIN E. GILKESON, of Hall & Gilkeson Drug Co., Claremore, Okla.; sergeant, Rainbow Division, in France.

NERIE E. LeCLAIRE, former clerk for Edwin B. Douglas, Chicago; Medical Department, 5th Army Corps, France.

DONALD W. HUBER, P. C. P. '12, formerly assistant in Prof. C. H. LaWall's laboratory, Philadelphia; sergeant, Food Survey Division, Sanitary Corps, Camp Hazlehurst, Long Island.

LLOYD WRIGHT, son of Dr. L. A. Wright, proprietor of the Santicoy Pharmacy, Santicoy, Cal.; lieutenant, 8th Infantry, U. S. A., Camp Fremont, Cal.

D. LEE HALLISEY, clerk with Hallisey Drug Co., Nashua, N. H. and student Mass. .C P.; seaman, Naval United S.T.A.C., Durham, N. H.

RICHARD URIAH GRUBBS, Alameda, Cal.; pharmacist's mate, U. S. Navy, reported killed in action.

HARRY PARSONS, druggist in Grass Valley and Fresno, Cal.; reported killed in action in France just before the signing of the peace armistice.

J. NORTON BOONE, manager soda department, Hanford & Shaw Drug Co., Leesburg, Fla.; U. S. Battleship Pennsylvania.

HUGH A. BARNES, secretary Barnes Drug Co., Maxton, N. C.; Naval Railway Battery No. 1, U. S. Marines, A. E. F., France.

HOW TO SEND LABORATORY SPECIMENS

The Department of Health of the City of New York has issued the following instructions to druggists regarding the sending of fecal specimens to the laboratory

Druggists, especially those in whose stores the Department maintains collection stations, should know the procedure to be followed in sending various specimens to the Department's laboratory. Although physicians and others concerned have previously been notified of the procedure to follow when they mail specimens of stools to be examined for typhoid bacilli, the Department is continuously in receipt of packages so packed, or so old, as to make examination of the specimen impossible or useless.

Whenever such service is desired, the physician should telephone the Department of Health, which will send a special messenger the next day for the specimen. To make these examinations reliable, a specimen must be absolutely fresh, and reach the laboratory within about two hours after it has been passed.

As the laboratory making these examinations is closed on holidays, and as it requires two consecutive days to complete the work required, specimens will not be sent for on the day before a holiday. Whenever a physician wishes the Department of Health to take charge of the termination of a case of typhoid, he should so notify it. A nurse will then make all arrangements for the examination of fecal specimens.

Professional & Trade Associations

INFLUENZA AND NARCOTIC ADDICTION

Dr. Copeland, Health Commissioner, Tells New York Branch How City Authorities Handled Recent Epidemic and Discusses Various Phases of Drug Regulation and Control

The druggists of the Metropolitan district present at the November meeting of the New York Branch of the American Pharmaceutical Association, held at the New York College of Pharmacy, heard some very interesting facts concerning the work of the New York Department of Health, the speaker of the evening being Dr. Royal S. Copeland, the present Health Commissioner. In relating his experiences since he assumed office under the Hylan administration, Dr. Copeland said that the first great problem with which he had to deal was that of the epidemic of Spanish influenza which had swept over the city, causing the death of 15,000 persons during last month. He also told of visiting one cemetery where he saw 450 bodies of victims of the epidemic piled up and awaiting burial, the scarcity of labor and of coffins making it impossible to bury the dead without difficulty. It finally became necessary to secure a steam shovel to dig the graves. But he could not but contrast the New York death rate with that of other cities, and in such a comparison New York was to be congratulated that the number of deaths from the epidemic was no larger. Boston, where the Health Department had established a vigorous quarantine, had a death rate due to the epidemic of 101 per thousand; Washington, 109; Baltimore, 140, and Philadelphia, 157, while in New York city the death rate was but 50 per thousand.

Dr. Copeland stated that there were several reasons why he did not order the schools and theaters closed during the epidemic. In the first place, all of the teachers have a knowledge of hygiene and of right living, having had to qualify in these branches of knowledge before they could become teachers. Again, all of the school buildings in New York are of modern construction and well ventilated, and as he saw it, the average child would be better off in such a building under the direction of a teacher than he would be in the average home where the parents knew little of the ordinary rules of sanitation, or where the workers depending upon their daily wage for the living could not suitably care for sick children. The schools were therefore kept open and the teachers were directed to watch each pupil closely, and if any sneezing, inflamed eyes, or other symptoms of influenza developed, the pupil was to be turned over to a health inspector at once. The plan worked; the sanitary conditions of most of the theaters was also equal to that of the average home, and the stage was made use of as a place of popular education with reference to the steps the people should take to ward off the epidemic. Fresh air was a most important remedy in the treatment of the influenza, and the construction of most modern theaters met most approved sanitary conditions. It became necessary during the run of the epidemic to close a large number of moving picture shows, however, as some of these had made scarcely any provision in their construction for proper ventilation.

The speaker defended the rule enforced a short time for "staggering" the transportation of passengers, the traffic on the subways and tubes in the rush hours of travel constituting one of the greatest menaces to the health of the people. He said that this was one of the great problems now before the Health Department, and some plan should be devised and the working hours of different business houses so changed that congestion of traffic would be lessened, and the volume distributed over a greater number of hours.

The Commissioner had no complaint to make of the manner in which the druggists were living up to the provisions of the Narcotic law. The greatest problem the health authorities had to contend with was that of drug addiction. What should be the proper course to pursue with the "poor devil" who is a drug addict? Are we going to make criminals of them by sending them to a prison or reformatory, or what should be done with them? The Department which he represented was looking for a solution to this problem and he would welcome any assistance the druggists could give him along this line.

Caswell A. Mayo outlined the development of the present narcotic laws and told the Commissioner that pharmacists were mainly responsible for the narcotic statutes now in existence throughout the country. Mr. Zagat told of the great prevalence of drug addiction, stating that as near as he could learn from apparently authoritative sources there were fully 200,000 drug addicts in Greater New York. Dr. Joseph Diner said the greatest menace to the people was the distribution of narcotics through underground channels by means of peddlers. The law so far had not been able to reach these gentry, and they were able to obtain supplies of those who had smuggled into the country narcotics from Canada, Mexico, and other countries. Another source of danger was the prescribing of narcotics by different physicians for the same habitue. In this way the physician would prescribe for an individual not knowing that another physician had prescribed similarly for the same person just before, while the habitue would take the quantity that more than met his needs and pass it along to other addicts or would use it in making other slaves to the habit.

Dr. Jeannot Hostmann thought that some of the promiscuous prescribing effected under the Harrison narcotic law could be regulated if an effort would be made to enforce the section of the law which required that the prescribing and dispensing should be done "in good faith" by the individuals named. So far as he knew this had never been tested in a court of law, and it would be interesting to have a judicial decision as to what constituted good faith.

Dr. William C. Anderson in discussing the narcotic law said that it now reached the prescriber and the dispenser. But the provisions of the law did not properly control the manufacturers' output, nor did it control the supply when it reached the hands of the addict. He thought this could be accomplished by providing that the addict should be licensed and registered. Then if the addict presented himself to a physician, the latter would not prescribe for him without being shown the addict's license. It would also prevent the addict from becoming a distributor of the drug himself, for the authorities would be able to trace his supplies from their manufacture until they reached the addict's hand. This suggestion met the approval of Dr. Diner, who thought that by compelling the addict to carry his license and to show it to the doctor he asked to prescribe for him, who would thereupon note on the license the amount prescribed, any other doctors when asked to prescribe would have a means of knowing whether the addict had received undue quantities of narcotics from other sources.

Dr. Copeland thanked the speakers for the interest they had taken in the discussion and answered a number of questions, among them one referring to the retention by the druggist of part of the sample taken by inspectors of the board, and the other with reference to giving druggists against whom complaints had been made an opportunity for a preliminary hearing before the charges were turned over to the authorities for prosecution. The Commissioner said he saw nothing objectionable in complying with these requests, and the inference was that the procedure in both cases would be followed.

Treasurer Gustave Horstmann reported the expenditures of the month as $22.75, with a cash balance of $137.68 on hand. Robert S. Lehman, chairman of the committee on education and legislation, in reporting on recent internal revenue rulings, called attention to the decision relating to the refilling of prescriptions containing narcotics during the present epidemic, a ruling which he said could not apply to druggists in New York State, as the State law prohibited such refilling. Dr. Joseph L. Mayer announced the death of the late Dr. Frederic E. Niece, a member of the branch, and a committee was appointed to draft suitable memorial resolutions. J. Leon Lascoff reported that the New York Ambulance Fund now amounted to $5300, of which $3600 had been expended for a New York State Ph.A. ambulance which had already been shipped to France, leaving $1700 on hand, an amount which the committee hoped to increase and to devote to reconstruction work in Russia.

ESSENTIAL STATUS OF PHARMACY

Dr. Henry Kraemer Starts Interesting Discussion Among Members of Detroit Branch—Would Give Boards More Power

After a dinner at the Fellowcraft Club, President Jones called the members of the Detroit Branch of the A. Ph.A. to order, forty being present. A letter of greeting was read from E. G. Eberle, George H. Grommet, chairman of the program committee, outlined plans for the season's work and proposed that the branch have a social evening to which the ladies might be invited. The proposition was adopted and the program will be arranged by the officers. It was also decided that a dinner should precede each of the monthly meetings.

Dr. Henry Kraemer, professor of pharmacognosy in the University of Michigan, and an ex-president of the American Conference of Pharmaceutical Faculties, was introduced and stated that the present war situation compelled an introspection into the condition of the profession, particularly since Dr. William C. Gorgas, surgeon general of the army, had opposed the establishment of a Pharmaceutical Corps, declaring that pharmacy was a non-essential specialty. To ascertain the facts which caused Dr. Gorgas to make that statement, Dr. Kraemer sketched the prevailing condition of the retail drug business, the part most accessible to the outsider, and asked if pharmacy as now practiced in the majority of cases would inspire a belief among pharmacists or outsiders in its essential status. Dr. Kraemer's endeavor is to create the ideal type of pharmacist who, he said, was the professional type, including the manufacturer, the scientist and the prescriptionist. The Technical High School can be made part of the program by serving to train men for pharmacy who can be used in stores as helpers, and if ambitious, such men would then go on in the profession, eventually attending the university type of schools. In order to bring about this contemplated regeneration it is necessary for boards of pharmacy to have more power. A man with no education or training can practice pharmacy by merely passing the State Board. He asserted that a preliminary education should be a requirement in order to produce men of real professional standard.

Dr. Kraemer then showed slides of various drug store window displays which might lead anyone to question the essential status of pharmacy as practiced today. This was followed by portraits of the pioneers and leaders in the profession, among them Pasteur, Guignard, Rice, Fluckiger, Hanbury, Schlotterbeck, Prescott and Stevens, men who have believed in pharmacy and have been recognized as high class professional men. In closing he stated that there was need of more such leaders and he urged that all should think and act.

L. A. Seltzer, in the discussion which followed, expressed his sympathy with Dr. Kraemer's ideals. In order to bring them about, he stated, it was necessary to secure the reform through the legislature, and therefore we must appeal to the people to convince them of its necessity.

J. H. Webster stated it was necessary to convince the druggists on the general proposition, since the opposition to the last prerequisite bill came from druggists themselves. C. A. Weaver said that the need for trained men is greater now than ever, and that educated pharmacists will be considered essential, as they show themselves worthy.

Charles F. Mann feared that druggists lacked the courage of their own convictions, saying that most of them wanted higher standards but will not work to secure them. It is up to pharmacists to bring this about, just as the medical profession raised their own standards and thereby increased their professional standing. Dr. Kraemer at this point mentioned the official recognition of pharmacy in the Students Army Training Corps.

Geo. M. Schettler briefly sketched the development of his own career. Originally making most of his galenicals, the lower prices of the manufacturing pharmacists eventually caused him to largely abandon this practice. The separation of commercial from professional pharmacy would be the solution. On the other hand, it takes little professional skill to compound most of the prescriptions as written by physicians today. W. A. Hall urged faithfulness to ideals, and an ambition to better pharmacy, and that we should inspire enthusiasm for our ideals in our employees.

Harry B. Mason stated that he did not deplore the advent of commercialism and that pharmacists have not gone down hill. He said he was certain that Geo. B. Evans, the leading commercial druggist, takes considerable pride in his prescription department and has many practical innovations in that department that merit imitation. He believed that professional pharmacy is gradually being developed. Economic conditions are responsible for the present status and the pendulum will no doubt swing back from extreme commercialism in due time. He agreed with Dr. Kraemer in the division of pharmaceutical education into two schools, one to train men to run drug stores, the other to train professional pharmacists. Evolution, not revolution, will bring about the desideratum, he said.

Dr. A. B. Stevens believed evolution would solve the problem without blaming the druggist for the existing conditions. He felt that we were not elevating our standards by the types of pharmacies existing today. Frederick Rohnert said a highly trained man is not needed to run the average drug store, and that it would be a mistake to make the standards too high.

W. L. Scoville said that such a complex matter deserved a great deal of consideration. Some commercialism is necessary in every profession. How is this thing looked at on the outside? That is the ladder on which we must climb. Hugh Craig believed it best to have both kinds of pharmacy in one store. Both kinds can be cleansed and improved. The professional side must not be submerged but should be emphasized, developed and better regulated by the Boards of Pharmacy.

Frederick Stearns & Co. were given a vote of thanks for their kindness in extending the use of their lantern and operator for the meeting.

PLANS FOR RETURNING PHARMACISTS

Chicago Branch Discusses the Year's Work, What Organized Pharmacy Has Done in the War, and Reconstruction Problems

Representatives of all the pharmaceutical associations centered in Chicago were present at the ninety-eighth monthly meeting of the Chicago Branch of the A.Ph.A., which was held at the City Club on Wednesday evening, Nov. 20, forty members and visitors being in attendance. Vice-president Clark presided, and Wm. Gray reported for the membership committee that 65 new members had been received during the year ending Sept. 1 and sixteen members lost, two of these, Louis C. Deck, of Girard, and F. C. Shaffer, of Chicago, by death. Since Sept. 1, seven new members had been received, and three lost by death, viz. Dr. Carl Lutz, of Ottawa, and Charles Fuller and Fred M. Schmidt, both of Chicago. The total membership is now 200.

"What Has Organized Pharmacy Done in the War?" and "What Are the Pharmaceutical Reconstruction Problems?" were the topics assigned for the discussion.

The great work of the N. A. R. D. being accomplished through Secretary Henry and Counsel Brokmeyer at Washington was recognized. Pharmacy has given ungrudgingly of her young men to the service, many thousands of them, and now the problems of restoring these men to their former places in business and professional life is before us. In Mr. Brokmeyer, the retail druggist has a man right on the ground and, backed up by the great organization behind him, ready to take advantage of every opportunity for the betterment of conditions in retail pharmacy. There is good prospect that the great stringency of competent help in drug stores will soon be relieved by the return to civil life of many pharmacists from the military and naval forces.

Plans for Returning Pharmacists

The A.Ph.A. has provided for a committee to look after the needs of pharmacists, returning from the war forces. This committee, headed by F. H. Freericks, of Cincinnati, has outlined its plans under a broad scope and a very comprehensive questionnaire will soon be presented to every retail pharmacist in the country in which information will be sought as to pharmacists and assistant pharmacists in the military or naval service and as to providing for these men upon their return to advantageous places in the drug business. The committee also plans to look after the completion of their pharmaceutical education and to provide special facilities for their registration. The committee wishes to work with committees from state and local organizations that there may be a personal touch given to the work.

Secretary Day referred to Chairman Hilton's report on the status of the pharmacist in the army and navy and stated that even though the formation of a pharmaceutical corps in the army had not so far been accomplished, yet with the ending of the war and a better understanding of the wishes of the pharmacists by the leading medical officers of the army, the prospects for obtaining such a corps were not dead by any means, and he urged that every effort be brought to bear upon Congress to bring about this much desired result.

Work of the C. R. D. A.

The Chicago Retail Druggists' Association was represented by President Umenhofer who summarized the war activities of this strong local organization as follows: Every member of the C. R. D. A. responded to the request of the Red Cross that prescriptions for dependent families of soldiers and sailors be filled without charge or at actual cost. There are stores where more than sixty of such prescriptions have been filled and yet not a single druggist has rendered an account to the Red Cross for reimbursement. The C. R. D. A. War Fund, instituted through Mrs. Walgren, a veteran of the Spanish-American War, has grown to a considerable size and is being disbursed to needy and lonesome pharmacists in the service, and to sick and disabled pharmacists returned from the front. The Woman's Organization of the C. R. D. A. has charge of these disbursements.

Woman's Organization Sells Bonds

Mrs. J. H. Riemenschneider spoke for the Woman's Organization of the C. R. D. A. Among the activities she mentioned an active interest in the Sunbeam League of the Red Cross; more than 500 books for the War Libraries; 55 pairs of woolen socks knitted for pharmacist soldiers from yarn purchased by their organization; the sale of $67,100 of Fourth Liberty Loan Bonds; purchase of Liberty Bonds by the organization and by every member of the organization so that their chapter was 100 per cent. Their service flag has twenty blue stars.

The Chicago Drug Club, represented by President Otto Mentz, has thirteen members in the service and thirteen sons and daughters in the service. The members are most thankful that no gold stars need to be added to their flag. The Club has subscribed for Liberty Bonds.

Loyalty of the C. V. D. A.

The Chicago Veteran Druggists Association was represented by E. Von Hermann, who read a letter from Secretary Bodemann, which stated that from its membership of thirty, there were nine blue stars, representing nine sons or grandsons in the service and two gold stars. The organization has purchased Liberty Bonds and given to the Red Cross. Despite the fact that a large proportion of the members are German-born or of German parents, nothing but the finest loyalty to our country has ever been expressed in their meetings and no quarrels nor harsh words have been spoken there.

Dr. Simmons Favors Pharmaceutical Corps

By special request, Dr. Bernard Fantus responded for the American Medical Association. Secretary Simmons of the A. M. A., upon being asked what he considered as the most valuable service of the A. M. A. to the war, he replied: "The keeping of quacks and incompetents out of the medical corps." The Association's card index of every practicing physician and surgeon of the United States had been freely consulted by the Surgeon-General's office and an endeavor had been made to leave in every community as many physicians as were really needed by the community. Of the 81,000 members of the A. M. A., 33,884 are in the service. Many have been killed and wounded. Dr. Simmons also stated that the A. M. A. favored a well-trained pharmaceutical corps for the army. He believed that the chief reason for the Surgeon General's ruling against the establishment of such a corps was the lack of standard educational qualifications for pharmacists.

CHEMISTS ADVOCATE RESEARCH INSTITUTE

Scope of National Laboratory Discussed at Meeting of American Chemical Society, New York Section

The American Chemical Society, New York Section, is now squarely behind the movement for the organization of an Institute for co-operative research by chemists, biologists and manufacturers. Resolutions were adopted at a meeting held at the Chemists Club on Friday evening, Nov. 8, approving the project as outlined by Dr. Charles H. Herty, who started the movement, and by other speakers including Dr. P. A. Levene, of the Rockefeller Institute for Medical Research; Dr. C. L. Alsberg, of the U. S. Bureau of Chemistry; Dr. F. R. Eldred, of Eli Lilly & Co., Indianapolis; Dr. A. S. Loevenhart, American University Experiment Station; Dr. D. W. Jayne, of The Barrett Company; and by Dr. John J. Abel, Johns Hopkins University, who wrote a letter to Dr. Herty on the subject, being unable to attend the meeting.

New Era in Chemical Industry

Dr. Herty drew the attention of members to the fact that the action taken by the Society at the time of the outbreak of the war, urging the necessity for dyestuffs, formed the foundation of the industry in the United States, and declared that a new period was now beginning in the chemical industry and the opportunity was presented to develop a medicinal industry for preserving life. The work by Germany in this line had not been conducted on scientific lines. This country, he said, should found the industry on research. He thought it advisable to provide sufficient funds to found an institute like the Mellon Institute of Pittsburgh. Looking at the question from the standpoint of manufacturers' interests he did not believe it advisable to have the Government concerned in the matter.

The [illegible] Dr. John J. Abel, of Johns Hopkins University, was read by Dr. Herty. Dr. Abel had discussed the plan with Dr. Herty before it was launched. Dr. Abel called it a National Institute for the alleviation of human suffering, and suggested the necessity of chemists and physicians co-operating. Crude drugs should be exhaustively studied, he said, by pharmacologists and chemists. There should be two groups engaged upon the work: Group 1 would include pharmacologists, biological chemists and similar investigators. Group 2 would comprise organic chemists who would perfect the syntheses developed by the first group. Dr. Abel urged sufficient endowment, and a Board of Management composed of men of the highest standing and ability.

Dr. Levene on Chemo-Therapy

Dr. P. A. Levene, of the Rockefeller Institute, said the remedies used in this country should be of American origin. They must not be inferior to those made abroad, and must excel them, if possible. All remedies can stand improvement, he said. They are far from perfect. The branch of medicine known as Chemotherapy is new, he said, and offers a large field for development.

System of Fellowships

Dr. F. R. Eldred, of Eli Lilly & Co., discussed the plan from the standpoint of the manufacturer. The development of new medicinal remedies was essential and vital to the public health. It did not mean that more drugs are needed; fewer and better remedies would be for the public good. He declared that very few German synthetic remedies were of real value. The greater portion had been foisted upon the public by clever advertising. This method of the German manufacturers only increased the number of drugs and lowered the medical standard. Dr. Eldred suggested that manufacturers might establish fellowships in the Institute and obtain research work of a high order, but it must be left to the Institute to carry on the work in its own way.

Dr. D. W. Jayne, of The Barrett Company, said in part:

"The great obstacle to the development of the synthetic drug industry from the manufacturer's point of view, is in my opinion, the inability to properly try out the results obtained in the laboratory. In research on dyestuffs, a new product or an old one can be definitely tested in the manner of its intended use, but lacking any constructive theory, the application of the results of the research chemist in drugs can only be determined in an unsatisfactory way at present. I am, therefore, of the opinion that the establishment of such an Institute as we are discussing, if properly carried out, would be the greatest stimulus to the rapid creation and development of a real American synthetic drug industry.

Scope of Institute's Work

"I believe that this Institute should have two functions:

"First. Research in the pure science, to determine the general effects on the human system of each class of chemical compounds, and the probable relative efficiency of these compounds of classes against certain ailments.

"Second, the determination of the efficiency for the purpose proposed of any drug submitted to it by a manufacturer, with a simultaneous determination of any side or after effects of the use of such drugs.

"The Institute could cover synthetic flavors and perfumes, as well as drugs, as especially in the case of flavors the absence of toxic or other harmful effect is a necessary requisite.

"It is also entirely possible, even probable, that certain natural products now used in food, can be nearly duplicated synthetically, and such products would certainly be proper ones for submission to the Institute.

"Summing up: Chemical manufacturers should be encouraged to enter the wide field which exists in the production of synthetic drugs.

"To secure rapid and proper development, a link should be formed between the manufacturers and the medical profession. An independent organization of the highest type of men, is needed to form this link.

"If formed, it would undoubtedly be used by the manufacturers, and should shortly become the leading factor in the situation.

Mellon Institute's Methods

Dr. R. F. Bacon, president of the Pittsburgh Section of the American Chemical Society, and director of the Mellon Institute, described the plan upon which the Mellon Institute was founded, and the rules regarding the use of the name of the Institute by manufacturers. He told of a dental cement which was developed for a manufacturer and which the Institute insisted should be held off the market for one year until it had been tested by dentists all over the country and pronounced good.

Dr. Jayne presented a resolution to the effect that the proposed plan for systematic research through the organization of an Institute for co-operative work by chemists, biologists and manufacturers should be fostered by the American Chemical Society, and that the secretary be instructed to forward this resolution to the Advisory Board with the recommendation that the Institute should be under the guidance of the American Chemical Society. The resolution was unanimously adopted.

The Advisory Board members are H. E. Barnard, H. K. Benson, F. K. Cameron, B. C. Hesse, A. D. Little and A. V. H. Mory.

Obituaries

CHARLES WESLEY SNOW

Charles Wesley Snow, long prominent in the financial, business and fraternal circles of Syracuse, and for years identified with the drug interests of New York State, died at his home in that city on Nov. 9, aged 83. He had been in failing health since last March, when he suffered a stroke of paralysis.

Charles Wesley Snow

Mr. Snow was born in Peterboro, N. Y., in 1835, and moved with his parents to Syracuse when he was five years of age. When he reached the age of fifteen he decided to go into the drug store of W. E. Tobey to learn the business. He applied himself so industriously that his employer took him into partnership when Mr. Snow was but nineteen years of age. In 1866 the firm was dissolved and he opened a store of his own in Syracuse, where he began to do both a retail and wholesale business, which soon reached large proportions. In the meantime, Syracuse was growing rapidly, and Mr. Snow, who had already purchased the building in which he was doing business, decided to make another move. He bought a lot on South Warren street on which he erected the first skyscraper in the city. This was completed in 1888 and into it he moved, the ground floor being devoted to his retail business and the second floor to the wholesale business, both of which were conducted under the name of the C. W. Snow Company, the other members of the firm being Mr. Snow's son, Nelson P., who was secretary and treasurer, and a brother. In 1916 the retail business was sold to the Powers Drug Co., the wholesale business being merged with that of Walker & Gibson, of Albany, and the Gibson Drug Co., of Rochester, under the name of the Gibson-Snow Co., Charles Gibson being elected president; Charles W. Snow, 1st vice-president, Nelson W. Snow, 2nd vice-president, and W. W. Gibson, secretary-treasurer.

Besides his lifelong connection with the drug business, Mr. Snow had many other activities. He was one of the incorporators of the Chamber of Commerce, which he served as president. He took an active part in the erection of the Onondaga Hotel, one of the finest hostelries in the State. He was for many years a trustee and an active worker in the May Memorial Church; chairman of the Board of Trustees of St. Joseph's Hospital; one of the counsellors of the Syracuse Home Association; trustee of the Onondaga Historical Society; member of the Board of Directors of the Associated Churches and Charities, and took an active interest in the Oakwood Cemetery Association. He was also prominent in Masonic circles, serving as master of Central City Lodge No. 305, F. and A. M. in 1857, and became a member of Central City Chapter No. 70 the same year. He was a member of Central City Council No. 13, and a Knight Templar. In 1862 he became a charter member of the Scottish Rite bodies, serving as deputy master of the Lodge of Perfection for several years. In 1909 he received the 33rd degree, honorary, in Boston.

In financial circles he was equally well known, becoming a director of the First National Bank of Syracuse in 1888. From 1902 to 1910 he served as vice-president, and from 1910 to 1914 as president of the same institution. He was then elected chairman of the Board of Directors, a position he held at the time of his death. He was also a trustee of the Onondaga County Savings Bank. He was a member of the New York State Pharmaceutical Association, and a life member of the American Pharmaceutical Association, which he joined in 1876. Besides his widow, he is survived by his son, Nelson W. Snow, vice-president of the Gibson-Snow Co., one daughter, Mrs. Irving S. Merrell, eight grandchildren, and two great-grandchildren.

DR. W. J. McKNIGHT

Dr. W. J. McKnight, who opened a drug store in Brookville, Pa., in 1863, and which is still conducted under the firm name of McKnight & Son, died in that city on Oct. 13, aged 82. He was widely known throughout the State as a physician, druggist, ex-senator, historian, business man and publicist. During the Civil War he served as quartermaster sergeant in the 57th U. S. Emergency Regiment and took part in the campaign against Morgan's raiders. He was appointed examining surgeon for Jefferson and Forest counties in 1862 by Governor Andrew G. Curtin, and served for seven years as a United States Pension surgeon. He was a graduate of Jefferson Medical College, Philadelphia.

Dr. McKnight was noted for his versatility. He served his district for a number of years as a State senator where he made a creditable record. Besides his drug business, he branched into the coal mining industry in 1895, developing both the Toby Valley Coal Company and the McKnight Coal Company. He was also the author of several works, his "Pioneer History of Jefferson County," and his "Pioneer Outline History of Northwestern Pennsylvania" being recognized as authoritative works on the historical development and growth of the State. He was a member of many associations and fraternal organizations. the funeral exercises being conducted by the Masonic order and the Grand Army of the Republic. Besides his son, J. B., who, with his grandson, W. J. McKnight, Jr., are in the drug firm of McKnight & Son, the following children survive: Amor Archer, Mrs. H. H. Kennedy, and Mrs. George A. Matson.

FREDERIC E. NIECE

Frederic E. Niece, superintendent of the Claremont Laboratories, New York City, who died at his home at Queens Court, Queens Village, on Oct. 27, well known to pharmacists of the Metropolitan district, was a bacteriologist and was engaged in studying the influenza epidemic when that disease, followed by pneumonia, caused his death. He was about 43 years of age, and a native of Scranton, Pa., where he entered the drug business in 1893. He graduated with the degree of Ph.G. from Brooklyn College of Pharmacy in 1899, and three years later received the degree of Phar. D. from the same institution. He also held the B. S. degree from Cooper Union and had studied at Johns Hopkins University. He was a member of the American and New York State Pharmaceutical Associations, and was a frequent contributor to pharmaceutical and other periodicals. His widow and four sons survive.

Louis K. Eastman, 67 years old, president of the Eastman Dispensing Apparatus Co., and proprietor of the Eastman Pharmacy of Detroit, Mich., died recently of pneumonia, following an attack of influenza.

Drug Trade Rulings and Regulations

Sale of Drugs for Venereal Diseases—

The State Bar Association of South Carolina recently indorsed the regulations adopted by the State Board of Health of South Carolina providing for the segregation and treatment of certain persons having or suspected of having communicable venereal diseases, stating that in the opinion of the association the just enforcement of the regulations would not unlawfully infringe on the lawful rights of the persons concerned, and it would therefore urge upon members of the bar to advise any client who may consult them in relation thereto to submit to the examination and free treatment furnished and designed to relieve them of the ravages of such diseases, viz., syphilis, gonorrhea and chancroid.

Rule 6 adopted by the State Board of Health requires druggists to keep record of sales of drugs for venereal diseases. The text is as follows "Any druggist or other person who sells any drug, compound, specific, or preparation of any kind used for or believed by the druggist or person to be intended to be used for the treatment of any of said venereal diseases shall keep a record of the name and address of the person making such purchase. A copy of said record shall be mailed each week to the local health officer." It is further provided that all information and reports concerning persons infected with venereal diseases shall be inaccessible to the public, except in so far as publicity may attend the performance of the duties imposed by the regulations and by the laws of the State.

Regulations for Druggists' Labels, Pill and Powder Boxes

Following the action of the Priorities Division of the War Industries Board, which has listed paper and board mills as an essential industry, the War Service Committee of Drug Labels and Drug Box Manufacturers have made the following rules in the use of paper and board which became effective Sept. 16. Under these rules writing papers used as label papers are to be standardized on the basis of 17x22—20 lbs.; coated paper used for labels, standardized on the basis of 25x38—60 lbs., while writing papers used for subscription blanks are standardized on the basis of 17x22—16 lbs. Boards used for cartons up to 8 ounces, standardized on a 15-point basis; 8 ounces and over, standardized on an 18-point basis. Oblong powder boxes are reduced to four sizes and to one size for seidlitz powder boxes; square and round pill boxes, reduced to four sizes, respectively; capsule sliding boxes reduced to three sizes. Gold paper for edges is eliminated, and only plain papers are to be used for stripping when the present stock on hand is exhausted. The rules allow all stocks on hand to be used until exhausted.

Use of Saccharin Permitted—

The Appellate Division of the Supreme Court has reversed the decision of the Court of Special Sessions in the case of the New York Health Department vs. the Excelsior Bottling Works, who had placed on the market soda water sweetened with saccharin, which was accurately specified on the label. In the preparation of the case the Referee Board of Consulting Scientific Experts reported that saccharin in small quantities added to food was not injurious to adult consumers, and when added in small or large quantities does not alter the quality or strength of food; but that when added as a substitute for sugar it must be regarded as a substitution involving a reduction in its quality. Regarding the use of saccharin, the members of the National Manufacturers of Soda Water Flavors have been advised to go ahead and use it in the States that do not specifically prohibit its use by law, disregarding all rules, regulations and warnings to the contrary, and defend any action that may be brought against them for so doing. The use of saccharin has been barred in about fifteen states. Some, however, profess to believe the New York State decision will establish a precedent.

Amendment to Decisions Relating to Colors in Foods—

The Secretaries of the Treasury, Agriculture and Commerce have just issued Food Inspection Decision 164 which amends several previous decisions relating to the use of permitted dyes in foods, adding the following numbers: Under Red Shades—107, Amaranth; 56, Ponceau 3 R; 517, Erythrosine. Under Orange Shade—85, Orange, 1. Under Yellow Shades—4, Naphthol yellow S; 94, Tartrazine; 11, Sudan I; 16. Butter Yellow—Yellow A. B. (benzeneazo-b-naphthylamine, and Yellow O. B. (ortho-tolueneazo-b-naphthylamine). Under Green Shade—435, Light green S. F. yellowish. Under Blue Shade—Indigo disulfacid. The numbers preceding the names refer to the numbers of the colors as listed in A. G. Green's edition of the Schultz-Julius Systematic Survey of the Organic Coloring Matters, published in 1901.

Disposition of Seized Narcotics—

In July last collectors of customs were informed by the Treasury Department that the medical departments of the Army and Navy would accept smoking opium and other opium preparations and derivatives for conversion into medical preparations for use in their respective services. The stocks of the forfeited narcotics in the hands of collectors were therefore directed to be shipped to the Army and Navy supply depots, the shipments not exceeding four pounds to be sent by mail, and if weighing more than four pounds to be sent by express. Now on the advice of the Postmaster General the shipment of such opium and its derivatives through the mails is held to be a violation of section 217 of the Criminal Code, and the Treasury Department has directed that all such shipments should be forwarded by express.

Shipping Intoxicating Liquor in Washington—

A statute of the Washington Legislature enacted in 1915 provides that any registered druggist actually engaged in business in the State, desiring to ship intoxicating liquor into the State, may procure a permit which becomes void thirty days after being issued. This statute was applied by the Supreme Court of that State in a recent case in which it was held that a shipment arriving in the State more than thirty days after the permit had been issued is contraband and subject to destruction, although shipment was made from the place of origin within the time named.

Saccharin Still Barred—

Under date of October 23, the United States Department of Agriculture denied requests for permission to use saccharin in food products. The Department refused to reverse its former decision prohibiting its use, holding that saccharin as a substitute for sugar reduces food value and that persistent use of it is likely to impair digestion.

Educational Department

DEVOTED TO INFORMATION, CRITICISMS AND SUGGESTIONS ON PHARMACEUTICAL TOPICS OF SPECIAL INTEREST TO ERA COURSE STUDENTS, DRUG CLERKS AND ALL WHO ARE INTERESTED IN THE STUDY OF PHARMACY

Conducted by CHARLES H. STOCKING, Ph.C., B.Sc., Director of the Era Course in Pharmacy.

Unregistered Clerks, Attention!

If you found it impossible to enter a college of pharmacy this fall or even if you expect to enter at a later date, you will find it to your advantage to enroll in the Era Course of Home Study in Pharmacy now, in order that you may improve your spare moments while engaged in your work in the drug store. The Era Course is arranged on a systematic home-study plan and is designed to give a theoretical and working knowledge of pharmacy.

It is divided into 10 parts and 60 lectures; it can be completed in a year or less, depending on the previous training of the student; its cost is merely nominal. A complete Prospectus can be had by addressing

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Every student of pharmacy and every practising pharmacist should own copies of the latest editions of the two standard books. No text book on pharmacy, no matter how complete it may be, and no college course can take the place for which these two books have been planned. A captain of a ship might as well try to cross the ocean without a chart; a railroad to run its trains without a schedule, as for a pharmacist to "try to be a pharmacist" without possessing the standard books upon which the practice of his profession is based. The cost is only nominal and is insignificant compared with the moral and economic value which accrues to those who have placed these books in their pharmaceutical library. Undoubtedly there are very few drug stores that do not include the U.S.P. and N.F. among the reference books at the prescription counter. Every drug clerk and every student of pharmacy should also possess individual copies in order that he may have them at hand at all times for study and for reference. Students of the Era Course in Pharmacy are strongly advised to purchase the books, and in most cases they have done so, although the recitations sent in by a few of the students show a lack of familiarity with official titles, formulas and methods of manufacture. To these students this admonition is particularly addressed and the suggestion made that no time should be lost in placing an order for copies of the latest revisions of both books.

The Use of the Pycnometer

The question has arisen in regard to the use of the pycnometer, or specific gravity bottle, as a method for determining the specific gravity of liquids. In addition to its use for determining the specific gravity of finely comminuted solids which is fully explained in Part III, this important piece of apparatus is frequently used for taking the specific gravity of liquids. The bottle should be thoroughly cleaned and dried and then weighed. After filling with distilled water the weight should be taken again, and the difference determined between this weight and the weight of the empty bottle. It will be readily seen that this difference equals the weight of the volume of water necessary to completely fill the bottle. The weight of an equal volume of the liquid of which the specific gravity is desired should then be determined, by filling the perfectly dry bottle with the liquid and weighing. Subtract from this weight the weight of the bottle and the result will be the weight of the volume of liquid necessary to fill the bottle. This weight divided by the weight of the water will give the specific gravity of the liquid. For example: Suppose the bottle when clean and dry weighs 12.75 Gm. and when filled with water the weight is found to be 32.05 Gm. The difference between these weights equals 19.30 Gm., or the weight of the water required to fill the bottle. The same bottle filled with alcohol can be assumed to weigh 28.50 Gm. The difference between 28.50 Gm. and 12.75 Gm. equals 15.75 Gm. or the weight of the alcohol. 15.75 divided by 19.30 equals .816, the specific gravity of the alcohol. Our rule, then, is to divide the weight of the volume of liquid required to fill the bottle, by the weight of the volume of water which the bottle will hold.

The Phenols in Creosote

The attention of all Era Course students who have not completed Part II, is directed to the last paragraph on page 39 and the succeeding paragraph on the following page. The phenols that occur in creosote are plainly stated to be guaiacol and the cresols. This is all that need be given in answer to Question 3, Lecture 8.

Era Course Classes

If there are other Era Course students in your town besides yourself do not fail to make their acquaintance. Organize a class. This plan is proving highly successful where our students have tried it. The members have a meeting as often as convenient; discuss the lectures, and quiz each other on them. Very often a senior clerk or a pharmacist will offer to conduct the class and act as quiz master.

This brings into play all the stimulating features of class work, and develops a lively interest in the work, to say nothing of the competition that is sure to arise among the members of the class. It is an excellent thing for students to exchange ideas on the various topics of interest. By this means the lessons will become more thoroughly impressed upon each student's mind and greater value derived from the study of the Course.

If you have friends who are interested in the study of pharmacy, get them to join the class and enroll in the Course. If you want the names and addresses of others in your city who are now enrolled, write to us and we will supply you with them. We shall also be glad to give you any further information or suggestions that you may wish in order to make the class work a success.

Considers the Course Thorough

"I have completed the Era Course in Pharmacy and feel that it is so thorough, with a little review I would be able to pass any board examination."

M. E. NOKES, St. Louis, Mo.

Era Course Brought Success

"I have been a student of the Era Course in Pharmacy and was a successful candidate in the examination held on September 17th by the Texas State Board of Pharmacy. I am glad to say that there was no question asked that could not be found in your Course, and will on all occasions heartily recommend it to anybody who wishes to become registered."

B. P. ACUNA, El Paso, Texas.

Helped Him Prepare for College

"The Era Course gave me a wonderful preparation for my college work, and I find that the Parts dealing with Materia Medica

were especially helpful to me. I am more than pleased with the instruction which I have received throughout the entire Course, as it has made my college work much easier for me."
HUBERT F. OWENS, Chicago, Ill.

QUERIES ANSWERED

5. Name three official substances stated by the U. S. P. to be optically inactive; three that are dextro-rotatory, and three that are laevo-rotatory.

(a) Optically inactive, thymol, eugenol, and eucalyptol. (b) Dextro-rotatory, camphor, cane sugar, and terebene. (c) Laevo-rotatory, salicin, menthol, oil of peppermint.

6. What are the three physical forms of the solid extracts recognized by the Pharmacopoeia? Name one extract illustrating each of the forms covered by your definition.

Extracts as prepared by the pharmacopoeial processes are directed to be of a soft, semi-liquid consistence, like thick honey; of a pilular consistence, or evaporated to complete dryness. Examples of the three forms are extract of malt, extract of gentian and extract of rhubarb.

7. What is meant by circulatory displacement?

The term "circulatory displacement" is applied to the method of dissolving soluble substances by suspending them below the surface of the solvent, either on a porous diaphragm or in a muslin bag or perforated vessel. As the substance dissolves, the solution saturated with it sinks to the bottom, displacing the solvent less charged with the solid which rises, and dissolves more of the substance, a constant circulation being kept up until the substance is dissolved or the solution becomes saturated.

8. What are the advantages and disadvantages of the use of extract of malt as an excipient?

Extract of malt is very adhensive and non-volatile but possesses the disadvantages of being dark colored and its use as an excipient is therefore objectionable for many pill masses.

9. What is meant by "acetic acid No. 8?"

The so-called "acetic acid No. 8" may be of various degrees of strength and purity. Originally it was an acid of 32 per cent, and the designation "No. 8" was derived from the English Excise system, in which the meaning of the term appears to have been that 1 part of this acid when diluted would furnish 8 parts of vinegar containing 4 per cent of acetic acid. At the present time in this country the term is generally applied to a commercial acid containing about 30 per cent of absolute acid.

10. What is elaterin and what preparation containing it is official?

It is a neutral principle obtained from elaterium, a substance deposited by the juice of the fruit of the squirting cucumber (*Ecballium Elaterium*). Trituration of elaterin.

11. What is pharmacology? pharmacognosy? microscopy? toxicology?

Pharmacology is the science that treats of drugs and medicines; their nature, preparation, administration and effect. Pharmacognosy treats of the identification and selection of vegetable and animal drugs. Microscopy is the art of examining objects with the microscope. Toxicology treats of poisons, their recognition, effects and antidotes.

21. What is an herb? a shrub? a tree?

An herb is a plant with little or no wood in its structure and dies altogether, or down on the ground when it has ripened its fruit, or at the coming of winter. A shrub is a plant with a woody stem, which branches at or near the surface of the ground, and which lives on year after year. A tree differs from a shrub in size, and in having the lower part of the stem unbranched.

13. What are four official drugs from each of the kinds of plants described as (a) herbs? (b) shrubs? (c) trees?

(a) anise, caraway, digitalis, hydrastis; (b) berberis, sabal, cubeb, mezereum; (c) elm, cinchona, guaiacum, camphor.

14. What part of the flower is the fruit?

The ripened ovary with its contents; sometimes, as in the apple, pear, etc., the calyx is adherent to the ovary, and forms the edible part, while the real fruit is the core, inside.

15. What is a legume and of what family of plants is the legume characteristic? What four official drugs are derived from this family?

A legume is a long, narrow pod with two divisions or valves, opening by both seams or sutures, one-celled, with parietal placental, and several to many seeded. The legume is characteristic of the Pulse Family or *Leguminosae* from which are derived acacia, balsam of peru, balsam of tolu, chrysarobin.

16. What are four synonyms for chimaphila?

Pipsissewa, prince's pine, bitter wintergreen, and rheumatism weed.

17. What are four official drugs derived from the natural order *Rutaceae?*

Buchu, orange peel, pilocarpus, prickly ash.

18. What well-known drugs are derived from the (a) Lichens? (b) Fungi? (c) Algae? (d) Coniferae?

(a) Cetraria; (b) ergot; (c) chondrus; (d) Canada turpentine.

19. What is the so-called "mother of cloves"?

Mother of cloves is the name given to the nearly ripe fruit of *Jambosa Caryophyllus* or clove tree, which furnishes cloves. The fruit is an ovoid, brownish berry about 25 Cm. long, contains starch and is less aromatic than cloves.

SAVINGS STAMPS FOR 1919

The war is over, but the reconstruction period is ahead of us. This means that considerable conservation and saving will be necessary for some time to come to enable the Government to bring home the 2,500,000 American troops that have helped to turn the tide against Germany and its allies. Considerable funds will also be needed to reconstruct devastated Europe and to bring it back to what it was before the outbreak of the world war. The Government is just as much in need of funds now as it was before Germany surrendered its arms to Marshal Foch and the Allies. The Treasury Department has announced that one or two more "Liberty Loans" may be necessary to enable the Government to continue its fight, while the sale of War Savings and Thrift Stamps must be pushed.

Relating to the issue of Savings Stamps for 1919, William G. McAdoo, Secretary of the Treasury, announces the "issuance of a new series of War Savings Certificates and Stamps to be placed on sale early in 1919 and to be known as the Series of 1919. The new Series will have a maturity date of January 1, 1924, and in practically all respects will be issued on the same terms and in the same manner as the present Series of 1918.

"A new $5.00 War Savings Stamp, blue in color, bearing the head of Benjamin Franklin, the apostle of saving, and a former Postmaster General, is in preparation. The new stamps will be placed on sale early in 1919.

"The same Thrift Stamps and Thrift Cards now in use will be continued in 1919 and will be exchangeable into new Series of 1919 War Savings Stamps."

Women in Pharmacy

CONDUCTED BY EMMA GARY WALLACE

MISS VENETUCCI ENROLLING RECRUITS

As a special enrolling agent of the United States Government in getting recruits for the Merchant Marine, Miss Josephine Venetucci, with the L. K. Liggett Company, New York City, has done splendid service. Up to October 23 she had enrolled more than one thousand men, many of whom were disappointed at not being able to go into the service at once on account of the quarantine against Spanish influenza, which prevented them being sent to the training ships.

Miss Venetucci

Miss Venetucci declares that she does not find the work the least trouble at all, and that it is a pleasure for her to feel that she is doing her "bit" in this way. About eight hundred of her men are already in the service, certainly a wonderful showing; it is also quite certain that many of them will remember with pleasure the capable young woman who helped them take their first step toward Federal enlistment. She is to be congratulated upon the record she has made.

AROUND THE CIRCUIT

Mrs. Nellie Florence Lee, financial secretary of the W. O. N. A. R. D., has just reached her Philadelphia home, after an extended tour covering the two months following the New Orleans Convention. Among the places visited were Mobile, Ala.; Chattanooga, Tenn.; Lookout Mountain, Tenn.; Louisville, Ky.; Chicago, Ill.; Toledo, Ohio; Cincinnati, Ohio; St. Louis, Mo.; Little Rock, Ark.; Cleveland, Ohio; Indianapolis, Ind.; Buffalo, N. Y., and Auburn, N. Y. Mrs. Lee has made a careful study of the condition of the various Chapters visited, and finds them all in a flourishing condition. A large amount of good war work has been accomplished, and in every instance a much closer social union brought about among the members themselves and the local retail druggists.

Mrs. A. Pauley, president of St. Louis Chapter No. 8, gave a reception at her home, October 10th, in honor of Mrs. Nellie Florence Lee. There was music, a report of the Convention and delicious refreshments. The chapter held its first fall meeting at the Planters' Hotel. There was a very large attendance; special interest was taken in the work of the local Tuberculosis Society, and a donation of $5 was voted on for the work.

Rock Island Chapter held its first fall meeting at the home of Mrs. A. J. Riess. There was a splendid turnout. The Convention doings were discussed and Mrs. Lee was presented with a solid silver tomato server from the Chapter; also a very beautiful hand painted china cake plate from Mrs. Harry Rowe. The decoration on the cake plate was the W. O. emblem done in gold.

Mrs. Croswell, who has acted as president of the Chapter, took occasion to bid farewell to her friends before leaving to make her home in East Orange, N. J.

Milwaukee Chapter, No. 19, held the first meeting of the season at the Blatz Hotel and voted $5 for the Soldiers "Smoke Fund" for the boys in France.

A request came from the National League of Womens' Service that each member contribute a can of fruit or vegetables for worthy relief work. It was decided to bring offerings of this kind at the next meeting.

Indianapolis Chapter No. 20, is already planning to double its membership during the winter and spring.

Mrs. Edward Ferger, president of the Chapter, is recovering from her recent injury which resulted in a broken arm.

The ladies meet all day Wednesday of each week, at which time they are entertained by Mrs. Ferger at her residence, No. 104 E. Maple Road. The time is spent in knitting and sewing for French relief.

It was decided at the last Chapter meeting that the Chapter should join the Local Council of Women.

The banner for the largest growth during the past year was awarded at the National Convention to the Indianapolis Chapter, and this is displayed at every meeting.

Following are the newly elected officers for the ensuing year: President, Mrs. Edward Ferger; vice-president, Mrs. Charles Watkins; recording secretary, Mrs. Harry Dickison; corresponding secretary, Mrs. William A. Oren; treasurer, Mrs. James Mead; chairmen war committee, Mrs. Harry Borst and Mrs. Arthur Johnson.

Sympathy is extended to Miss Minnie Dierringer of Cincinnati, who has been prominently identified with the work of the Women's Organization, upon the death of her nephew, Richard Dierringer, who was killed in action recently in France.

Miss Ida Jones, of Johnson, Vt., was recently elected president of the Vermont State Pharmaceutical Association. Miss Jones is the only lady on the executive committee.

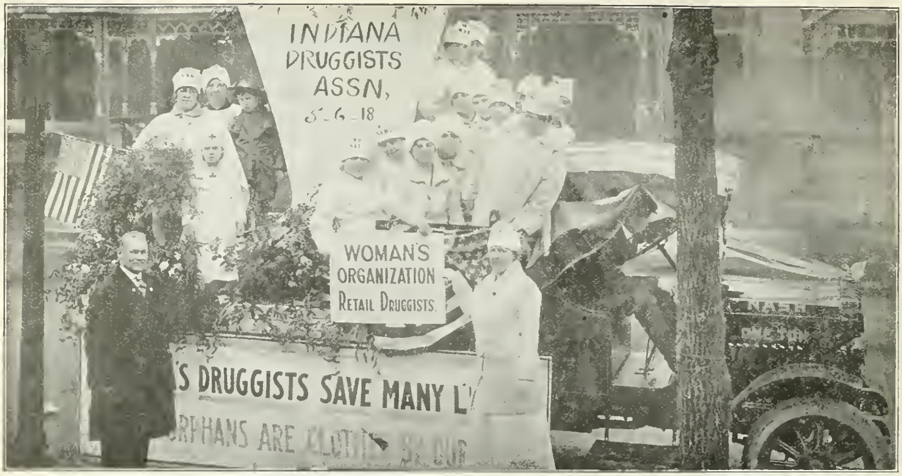
Miss Helen Lingang of Owensboro, Ky., recently passed the State Board of Pharmacy successfully.

Mrs. Julius H. Riemenschneider gave a delightful luncheon in honor of Mrs. Lee upon the occasion of her visit to Chicago. Mrs. Lee was presented with a beautiful bouquet of flowers and a choice record for her Edison phonograph.

One of the influenza victims of Brattleboro, Vt., was Miss Margaret Root, only daughter of Wilford F. Root, a prominent druggist of that city. Miss Root was associated with her father in the drug store.

The California legislature has as one of its new members the wife of a Berkeley druggist, Mrs. Anna L. Saylor. Mrs. Saylor has long been prominently identified with public interests and will serve her constituents well.

The unexpected death of Mrs. Edward E. Schemidt,



That the ladies of Indianapolis Chapter of the W. O. N. A. R. D. are patriotic and public spirited is shown by the part they took in the Third Liberty Loan parade held in the Indiana capital some weeks ago, the first time, it is said, where the Hoosier druggists were represented in any way in any parade or procession in that city. The ladies were responsible for the float represented in the above picture, which was beautifully decorated and carried a large mortar and pestle and numerous banners making clear just what the float stood for.

The ladies, all of whom are well known members of the W. O. N. A. R. D. and wives of Indianapolis druggists; those riding in the procession were: Mrs. James E. Sproule, Mrs. Harry Borst, Mrs. William A. Oren, Mrs. James C. Mead. Mrs. Frank H. Carter, Mrs. Edward Crawford, Mrs. Arthur Johnson, Mrs. J. C. Clark, Mrs. Harry Dickson, Mrs. Edward Arnold, Mrs. Edward Stuckmyer, Mrs. John Cade, Mrs. T. E. Smith, Mrs. John Stokes, and the president of the Chapter, Mrs. Edward Ferger. Mrs. Ferger and Mr. J. M. Barrett, of the N. A. R. D. field force, are shown standing on the ground in the picture.

of Milwaukee, Wis., cast gloom over the local Chapter there. Mrs. Schemidt underwent an operation and her recovery was confidently expected, but complications set in and she passed away in a few hours. She was chairman of the publicity committee and a devoted member of the chapter. She is survived by her husband, several sisters and brothers, and mother.

Chapter 2 of the W. O. N. A. R. D., Chicago, made a wonderful record in the Fourth Liberty Loan Campaign, selling nearly $60,000 worth of bonds. About $2,000 of this was taken by husbands and friends, the balance was disposed of from the booths in the Loop Drug Stores. The ladies took a prominent part in the Liberty Loan parade. They were dressed in Red Cross uniforms and rode in a very handsomely decorated float which carried a large Mortar on the front of it. They also flew a service flag with twenty blue stars and one gold one; the gold one was for the brave son of Mrs. Lehman.

UNIVERSITY OF IOWA

The male students of the College of Pharmacy are all members of the Students' Army Training Corps, Co. A., their time being divided between military and academic work according to orders from the War Department. The schedule of class work required has been furnished by the Committee on Education of the War Department dated Oct. 1, 1918. By this order colleges of pharmacy having high school entrance requirements are recognized by the U. S. Government. The total time devoted to military and academic instruction including examinations, lectures, recitations, laboratory work and supervised study is 53 hours per week.

S. H. Bickel, Spirit Lake, and R. S. Kiefer, Ottumwa, have been transferred to an officers' training camp.

The scourge of Spanish influenza which visited the S. A. T. C. was met by prompt action of the University authorities and successfully handled. The University Hospital of 400 beds, was supplemented by converting the Masonic Temple, Elks' Home, and the Law Building into temporary hospitals. The nurses in training and the entire senior-junior medical students were used as nurses under direction of the hospital staff of more than thirty physicians, while the students of the College of Pharmacy had charge of the hospital dispensary. The total number of cases was more than 1,000, and due to the strict quarantine and facilities for handling the situation, the fatalities amounted to less than 3 per cent.

H. E. Crutchett, ex '12, of Armour, S. Dak., died from pneumonia recently at the Great Lakes Training Station.

MASSACHUSETTS

The Massachusetts College of Pharmacy, which opened its current session in September according to schedule, was obliged to close its doors on Sept. 27 on account of the epidemic of influenza, which was very severe in Boston. The epidemic did not begin to abate until October, and work was not resumed in the college until Oct. 28. To make up for the time lost the college calendar has been revised, Christmas vacation beginning on Dec. 1 and ending on Dec. 28. The college will be closed on New Year's Day.

Occupation of the new building, the gift of George R. White of Boston, was without formality, the new students being received by Dean Theodore J. Bradley and assigned to their respective classes. The students number about 150, including 50 women.

New Books for Pharmacists

TREATISE ON APPLIED ANALYTICAL CHEMISTRY; methods and standards for the chemical analysis of the principal industrial and food products. By Professor Vittorio Villavecchia, director of the chemical laboratories of the Italian Customs. With the collaboration of C. Fabris, G. Rossi, R. Belasio, A. Bianchi, G. Sylvestri, F. Barboni, G. Armani, G. Bosco and A. Cappelli. Translated by Thomas H. Pope, B.Sc., A. C. G. I., F. L. C., University of Birmingham. Vol. II, 10x6½ inches, 536 pages, cloth, $6 net. Philadelphia, P. Blakiston's Son & Co.

This is the second volume of Prof. Villavecchia's treatise, the first volume of which appeared in February of the present year. As stated in our previous notice of this work, the methods and results described are largely those obtained from a long experience in the Laboratories of the Italian Customs Department, and as such, they represent the methods that have been repeatedly tried, many of them being carried out and studied almost daily by the specialists in their respective fields who have collaborated with the author in the preparation of this volume.

Volume II deals with the analysis of meat and its preparations; milk and its products; flour, starch, and derived products; sugars and products containing them; beer, wine; spirits and liqueurs; essential oils; turpentine and its products; varnishes; rubber and gutta percha; tanning products; inks; leather; coloring matters, and textile fibers, yarns and fabrics. For each product considered a brief statement is made of the different cases and the analytical problems commonly presenting themselves, as well as of the investigations and determinations to be made to solve them. Detailed descriptions are then given of the methods to be followed. An important feature is the giving of criteria and standards by the aid of which the industrial, commercial or hygienic value of the product may be ascertained from the analytical data obtained. The work as a whole constitutes a notable addition to the literature of analytical chemistry, and it is sure to be frequently consulted by all classes of analysts.

English, French and Italian Medical Vocabulary. By Joseph Marie, Philadelphia. 112 pages, cloth, 50 cents. Philadelphia. P. Blakiston's Son & Co.

As stated by the compiler, this little book aims especially to provide the medical words that may be needed by doctors, Red Cross nurses, and others going "over there." Most of the terms will not be found in the ordinary dictionary, and it is therefore believed that this compilation will prove useful. Besides the list of medical words in the languages named, there is a list of phrases in each of the languages for directing first aid to the injured; a list of Italian abbreviations in general use, and sections containing remarks on the pronunciation of Italian and French respectively. There are also various other lines of information likely to prove useful to the user of the book as tables of weights and measures, European money and equivalents in U. S. and English money, thermometric comparisons, metric system, etc.

CALCULATIONS OF INORGANIC CHEMISTRY AND QUALITATIVE ANALYSIS. By Alexander Smith, professor of chemistry and head of the department of chemistry in Columbia University, and William G. Moore, research chemist, National Carbon Co., Inc., Cleveland. 12 mo., 107 pages, cloth, $1. New York, The Century Co.

This book contains 350 problems covering practically every phase of mathematical work that the student is apt to meet in inorganic chemistry and qualitative analysis. One observation emphasized by the authors is, that if qualitative analysis is taught without any reference to simple physico-chemical relations, the student loses what he learned of inorganic chemistry, and gains only a mechanical knowledge of qualitative analysis. It is desirable, therefore, to continue the applications of physical chemistry in order to develop the pupil's knowledge of fundamental principles. This observation will coincide with the experience of teachers of chemistry generally, and for this reason drill in working problems like those here given should be carried on concurrently with laboratory and classroom work. The book is a good presentation of the subject.

That the science of chemistry is based upon experimentally established facts is a matter of common knowledge, and this statement becomes all the more convincing when measured by the author's logical exposition of the fundamental theories set forth in this book. Any student following this exposition as a class room text or for individual reading is sure to have a satisfactory comprehension of the great importance of theory in the study of general chemistry.

OUTLINES OF THEORETICAL CHEMISTRY. By Frederick H. Getman, Ph.D. (Johns Hopkins), formerly associate professor of chemistry in Bryn Mawr College. 2nd edition, thoroughly revised and enlarged. 8 vo., 13+539 pages, cloth, $3.50 net. New York, John Wiley & Sons, Inc.

The first edition of this work has for several years held an enviable reputation as a textbook designed to meet the requirements of those beginning the study of theoretical or physical chemistry. In the second edition the author has brought his work well down to date, adding much new material and otherwise recasting the entire text to represent the latest authoritative conceptions of the fundamental principles on which our present knowledge of chemistry is based. The features which distinguish this edition from the preceding edition are thus briefly summarized:

1. The necessity of introducing a short chapter on the modern conception of the atom and its structure involved the further necessity of including a preliminary chapter treating of those radioactive phenomena upon which the greater part of our present atomic theory is based. 2. The chapter on solids has been practically rewritten, the space formerly devoted to an outline of crystallography being devoted in the present edition to a discussion of the absorption of heat by crystalline solids and the bearing of X-ray spectra on crystalline form. 3. The increasing importance of colloidal phenomena, not only to the chemist but also to the biologist, to the physician, and to the technologist, has prompted the author to rewrite the entire chapter on the chemistry of colloids. 4. The Brownian movement and its bearing upon the existence of molecules are briefly presented in a separate chapter in order to emphasize the importance of the work of Perrin and others in confirming the kinetic theory. 5. The chapter on electromotive force has been enlarged so as to include a discussion of the methods proposed for determining junction potentials and the useful applications of concentration cells. 6. A new chapter on the salient facts and more important theories of photochemistry replaces the former chapter treating of the relations between radiant and chemical energy.

Louis Emanuel, Jr., aged 32 years, died in Pittsburgh, Pa., on November 4, of pneumonia. Mr. Emanuel was a retail druggist, like his father before him. His father has for very nearly 50 years been located at Second avenue and Grant street, and the son was at 2913 Bedford avenue.

CAUSATION AND TREATMENT OF INFLUENZA

How the H. K. Mulford Company Prepared to Meet the Pandemic of 1918

Realizing that the epidemic of influenza raging in Europe was likely to invade the United States, the H. K. Mulford Company early prepared to meet the demand for serums and vaccines required for the prevention and treatment of the disease and its complications. The disease was known to be due to a mixed infection in which the influenza bacillus (Pfeiffer's bacillus), pneumococcus, streptococcus, micrococcus catarrhalis and the staphylococcus were the invading causative microorganisms.

Early in September the facilities of the Glenolden Laboratories were offered to the hospitals of Philadelphia to aid in the investigation of the cause of influenza and particularly the pneumonia complications. Material was sent from the Philadelphia Hospital, U. S. Naval Hospital and other institutions for study. Fifteen strains of the influenza bacillus and virulent strains of streptococcic hemolyticus taken from the material sent in from the hospitals were added to the influenza bacterins to insure their greater specificity. The pneumonias following the attacks were known to be due to the pneumococcus and streptococcus, consequently antipneumococcic and antistreptococcic serums were prepared in large quantities to meet the requirements.

For several years previous, extensive studies had been made by Dr. A. Parker Hitchens, former director of the laboratories, to determine the character of the infections responsible for influenza, acute bronchitis and common colds, which year after year regularly occur in the United States. The microorganisms causing these diseases in former epidemics of influenza are the same as those responsible for the pandemic of influenza occurring in 1889-90, and also the present pandemic.

The H. K. Mulford Company are, therefore, entitled to credit for the research work done in their laboratories, which enabled them to place in the hands of the medical profession a serobacterin and bacterin for the prevention and treatment of the respiratory affections, particularly for preventing influenza and the catarrhal and lobar pneumonia complications. These bacterins, known respectively as Influenza Serobacterin Mixed and Influenza Bacterin Mixed have attained high reputation both as prophylactic and therapeutic agents.

When the influenza finally reached this country and with sudden onslaught swept over the Eastern section of the United States, these reliable and effective prophylactic and therapeutic agents were supplied in enormous quantities and were largely responsible for controlling the disease and in reducing mortality. Reports from physicians in charge of medical work connected with industrial institutions, boards of health and from general practitioners abundantly justify the prophylactic use of Influenza Serobacterin containing the organisms isolated from the present epidemic in preventing Influenza and Pneumonia.

It is too early to supply exhaustive statistics, but enough evidence has been accumulated to fully justify the employment of Influenza Serobacterin or Influenza Bacterin Mixed, for the prevention and treatment of influenza. It has been amply demonstrated that patients immunized by the bacterins rarely acquire influenza and those who take the disease are practically insured against complication of the pneumonias which have proved so fatal during the recent epidemic.

The Ontario College of Pharmacy at Toronto has been temporarily closed on account of the prevalence of Spanish influenza and pneumonia, nearly all of the students have gone to assist in the drug stores.

NOW THE HENRY LIVEZEY CO.

Following the announcement made in last month's Era that Henry Livezey, 198 Broadway, New York City, had purchased the entire business of Hypodermic Syringes, Needles, etc., which were heretofore manufactured and sold by Johnson & Johnson, and which they decided to discontinue, as also that he had purchased the entire stock of catheters and similar goods which the same company had ceased manufacturing in order to devote their entire attention to the manufacture of their standard line of surgical dressings, Mr. Livezey now announces that he has formed the Henry Livezey Co., which will continue the manufacture and sale of these goods, carrying a complete stock of the various styles and sizes, and will give immediate attention to all orders.

Mr. Livezey has also purchased the entire stock of Imported French Silk Catheters formerly handled by Van Horn & Sawtelle, which company was bought out by Johnson & Johnson, and is making arrangements to import these goods and carry them regularly in stock. The new company will also continue to handle a line of Elastic Hosiery, Abdominal Supporters, Trusses, and a complete line of Clinical Thermometers.

Mr. Livezey is pre-eminently qualified for this highly specialized line of industry. He was engaged in the surgical business for more than ten years before going on the road for the J. Elwood Lee Co., and when this company was consolidated with that of Johnson & Johnson he became a special salesman for their line of trusses. He later took up the sale of the line of Druggists' Sundries of the Lee Tire & Rubber Co. when that company extended its manufacture of these goods. For the past five years he has maintained an office at the present address of the new company, and in many cases he has been acting as purchasing agent for out-of-town customers who were looking for some special article the manufacturer of which they were unable to locate. He states that the new company will handle only the highest quality of goods and every effort will be made to maintain the reputation which Johnson & Johnson have always enjoyed with the trade.

ABBOTT'S NEW SURGICAL DRESSING

Every druggist in the United States should be interested in encouraging the manufacture of typically American medical products. One typically American invention is the new wax-impregnated open-mesh lace dressing for wounds, burns, bruises, etc., which bids fair to revolutionize the present-day dressing methods. Careful tests in large industrial hospitals show that by using this lace-mesh, 50% to 75% of the gauze, absorbent cotton, and roller bandages may be saved, as well as hours of the time of surgeons and nurses, not to mention the saving of agony to the patient experienced in the removal of the old sticking, secretion stiffened pad of dressings, for this remarkable dressing does not stick.

The Abbott Laboratories, Chicago, Ill., who make this Parresined Lace-Mesh Surgical Dressing, offer a special outfit containing a box of six envelopes of the Lace-Mesh, an ounce of Dakin's Dichloramine-T, and four ounces of Chlorcosane—the solvent for Dichloramine-T,—prepaid to any point in the United States for only $2.50. They include, without charge, in the shipment, a trial bottle of Chlorazene, Dakin's water-soluble, staple antiseptic, and one of Digipoten, a typically American digitalis preparation which leaves no excuse for using the German. Bring this to the attention of your doctor friends and tell them you will obtain the package for them. They will appreciate your interest.

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